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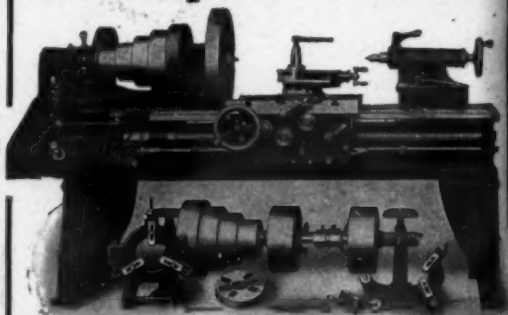
for Free Distribution to all Users
of Machine Tools

HITCHCOCK'S MACHINE TOOL LIST

A Reference Book for Buyers
of Iron Working Machinery

Published by
A. H. HITCHCOCK
626-627 Monadnock Block
Chicago

10, 12, 14, 16 & 18 inch
Champion Lathes



For the Factory, Tool Room or Repair Shop give the best satisfaction because we have put the most practical conveniences in their design.

You'll want a *Champion Lathe* if you are going to have your shop equipped with representative modern tools.

Quick Change and **New Standard Lathes**, with or without Taper Attachment, Draw-in Attachment, Turrets, etc.

Write for catalogue

Champion Tool Works Co.

2426 Spring Grove Ave.,
Cincinnati, Ohio, - U. S. A..

EXPERIENCE

More than ten years ago—when the first Acmes were built—we realized that in order to perfect the machine along the most practical lines we needed actual running experience in varied classes of work.

So we set the machines to work on all kinds of jobs for other people, **but in our own plant**, and for years now, we've been running hundreds of them daily.

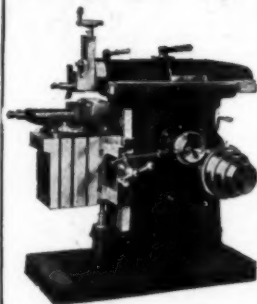
We've improved the machine constantly, not only in the variety of work possible, but in strength, compactness and general saving abilities.

Our extensive experience is built into present "Acmes."

THE NATIONAL ACME
MANUFACTURING COMPANY
CLEVELAND, OHIO.

BRANCH OFFICES
NEW YORK, 17 WHITE ST. BOSTON, 101 FINE ST.
CHICAGO, 649 WASHINGTON AVE.
ATLANTA, CANAL ST. BLDG.
WAREHOUSES, NEW YORK, CHICAGO

Step toe Shapers Are

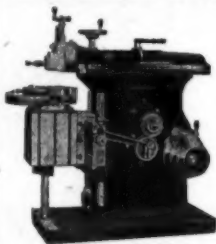


**Accurate
Economical
Good**

Because they have been built with these points in view, and we can show you that it will be to your advantage to buy a Step toe.

The John Step toe Shaper Co.
Station B, Cincinnati, Ohio

Dollars and Work



**"Cincinnati"
Shapers**

turn out the most work for every dollar of cost.

It's in the way we build them, and that's what we want you to know about.

Then you'll know why we make that claim and why we can back it up.

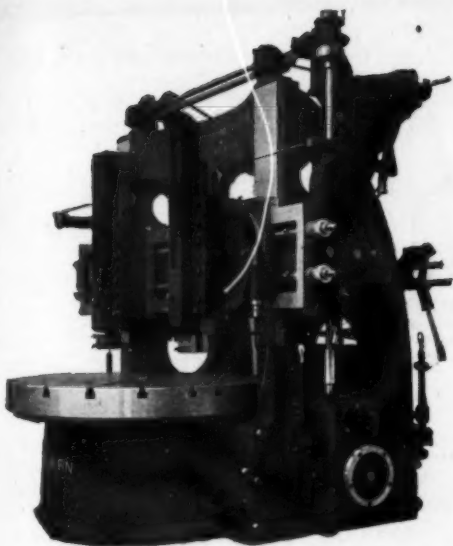
No. 1610—26 inch.

*Our free Shaper Book tells how we make them.
Will you send for it?*

The Cincinnati Shaper Co.

Colerain Ave. and Elam St., CINCINNATI, OHIO

Plain and Back Geared Crank Shaper, Geared Rack Shaper,
Open Side and Traverse Shaper.



Colburn ^{New} Model Boring Mills

Are equipped with rapid production devices which enable work to be turned out with greater speed and economy.

They are of massive proportions, have an excess of power and are easily and quickly handled.

*Send for our handsome new catalog
It will interest you*

Colburn Machine Tool Co.
Franklin, Pa.



You Fish For Orders

We'll Make the Machines

Under a contract with us you will have nothing to do but bait your hook, and fish. We will build your machine, and guarantee the material, the workmanship and the cost, which will be as low as you can realize in your own shop—probably lower. The advantages of the proposition are that you will sell more machines, make as much or more on them, be sure they are right, avoid all the risk of manufacture, and save most of your capital to extend your market.

Get in touch with us

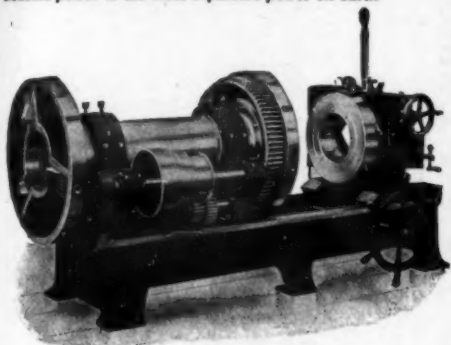
We can't hurt you; we may help you

Our address is Fitchburg, Mass.; what is yours?

C. H. Cowdrey Machine Works

**Manufacturers of Machinery on Contract; Specialists
in cost and time saving.**

Muscle power is the most expensive power on earth



Peerless, P. D. Q. C. and Duplex

Power Pipe Machines

Save Tired Muscles and Time

We can supply you with the power machine that will best fit your peculiar needs, because we make a complete line of them for all purposes.

And don't forget that the Peerless Adjusting Mechanism, with which they are equipped, has advantages that are real.

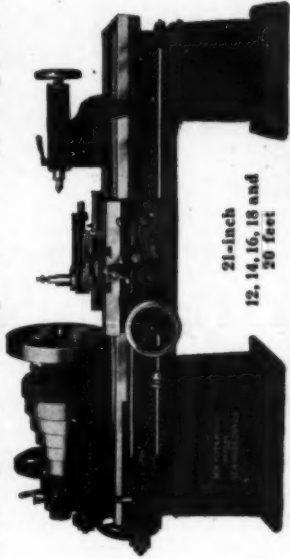
Tell us your requirements and see what we can do for you

Bignall & Keeler Mfg. Co.
Edwardsville, Ill.

The Economy of New Haven Lathes

Lies in their Power and Accuracy, and in those Modern Improvements and Conveniences that adapt them to a Wide Range of Work

Made from
18 to 65-in.
swing and
from
8 to 36-ft.
long



21-inch
12, 14, 16, 18 and
26 feet

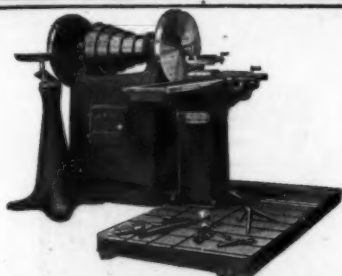
Our
Moderate
Priced
Lathes
are made
18, 21, 24
and 28-in.

This Moderate Price Standard Lathe

offers more real lathe value for the money, we believe, than can be found in any other tool. It has built into it the most modern design; it has behind it 60 years of experience, and the New Haven guaranty.

A lathe for every need. What's yours?

NEW HAVEN MANUFACTURING CO., NEW HAVEN, CONN.



90 Inch Pattern Makers' Face Plate Lathe

A combination lathe capable of handling large work to advantage, while free from awkward or objectionable features for small work. Considering its extremely wide range, this is one of the most useful machines ever offered. It is worthy of a most careful investigation. Extension base with tail stock can be furnished. We shall be pleased to send particulars

FAY & SCOTT, - - - DEXTER, ME.

Manufacturers of Engine, Extension Gap, Facing, Chucking, Turret and Patternmakers' Lathes. Special Turrets for Lathes of any make.

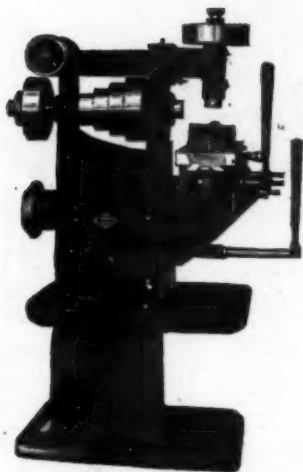


Quality of Cincinnati Lathes

manifests itself in every way. After comparing point for point you will purchase from us. Furnish **Quick Change** or an unlimited **Feed Box 5** step cone or wide **3** step cone with double back gears. Why not install a machine for your particular work?

The Cincinnati Lathe & Tool Company

2730-32 Spring Grove Avenue, : : : Cincinnati, Ohio



Chicago (Duplex) Hand Miller

Superior Machine for the manufacture of small Auto Parts.

Vertical Spindle furnished regularly with the machine, together with the Overhanging Arm and Arbor.

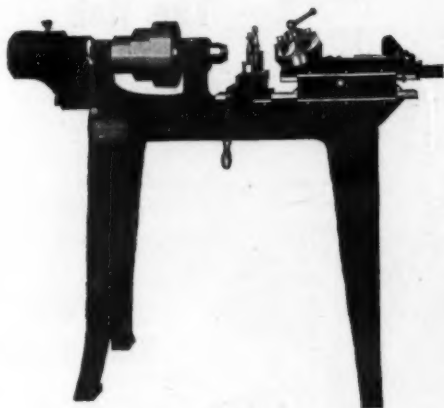
Chicago Machine Tool Co., Chicago, Ill.

Demonstrations at

Hill, Clarke & Co., Inc.,

Boston, New York, Cleveland, Philadelphia, Chicago

THE TILTED TURRET



No. 1 Turret Lathe

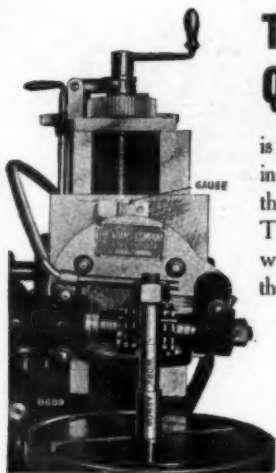
Especially adapted for Brass Work

- Automatic Bar Feed.
- Automatic Chuck for Gripping Stock
- Independent Stop for each Turret Hole.
- Automatic Lubrication of Machine and Countershaft.

Wood Turret Machine Co., Brazil, Ind.

Distributors

Hill, Clarke & Co., Inc.,
Boston, New York, Cleveland, Philadelphia, Chicago



The Hob Question

is merely a question of obtaining the proper angle to bring the thread exactly vertical. This is a very difficult matter with any machine except the

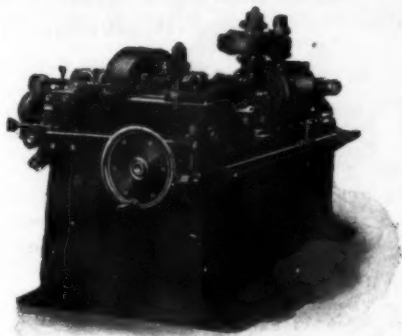
Farwell Gear Hobber

on which this angle, as well as the tooth depth, is set by gauge, thus assuring absolutely accurate gears at all times.

Get our circular No. 802-H and let us submit figures on your work to prove the efficiency of this machine.

The Adams Company
804 Second Street, Dubuque, Iowa, U. S. A.

Lees Compound Horizontal Gear Generator



A Manufacturing Tool for Hobbing Spur, Spiral and Worm Gears and Threading Worms

The work arbor is rigidly supported at both ends, and the drive is located half-way between the work and cutter.

The centers of this machine can be brought together without overhang in either work arbor or cutting arbor.

The work spindle and cutter arbor may be rotated at high speed on any pitch for cutting a gear with a small number of teeth, obtained by a compound indexing gear of two distinct ratios.

*Glad to post you on all details of this rapid,
● rigid and accurate machine*

The Lees-Bradner Co.
Cleveland, Ohio, U. S. A.

AIR COOLED DRILLS ARE BEST BY TEST



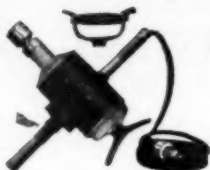
SEVEN SIZES TO BORE IN STEEL

3-16, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, 1 and $1\frac{1}{4}$ inch. They are made for either alternating or direct current, and are dependable tools that we guarantee will give you satisfaction.

We make Center and Surface Grinders From One-Quarter to Two Horse Power

They are time and money savers that you ought to investigate. Glad to send them on trial for a test in your own work.

THE UNITED STATES ELECTRICAL TOOL CO
CINCINNATI, OHIO



The Peerless

Air Cooled, Portable Electrical Drills and Grinders



Drills made in eleven sizes
3-16, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, 1, $1\frac{1}{8}$, $1\frac{1}{2}$, 2 and $2\frac{1}{2}$ in.

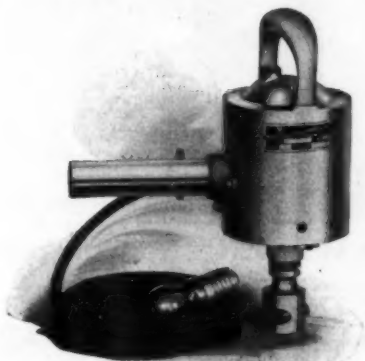
Tool Post, Surface, Bench and Aerial Grinders, Motors from $\frac{1}{4}$ to 3 h. p. All machines wound for alternating current as well as direct current. Machines sent on trial.

Write Dept. R. for Catalogue

The Cincinnati Electrical Tool Co.
650 Evans St., Cincinnati, Ohio

"Hard Service"

Electric Drills and Reamers



Made in six sizes for 110 volt or
220 volt direct current.

Drilling capacity 1-4 to 2 in.

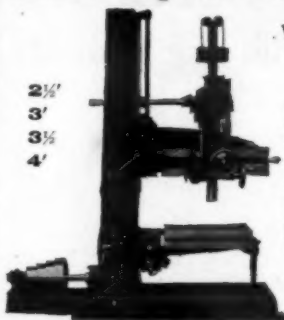
Reaming capacity 3-4 to 1 in.

Write for bulletin No. 18

Electric Department
The Van Dorn & Dutton Co.
Cleveland, Ohio

Your Shop Is Not Complete

without the Gang
Radial Drill.

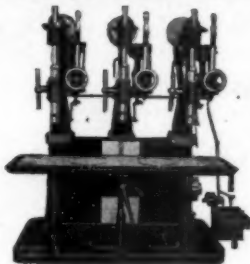


The perfect direct drive—the control of all spindle motions by one lever—the enclosure of all gears—its capacity for a wide range of work—are some of the special features that make our machine a top-notch in every way. We are ready to show you.

Your name please?

The Wm. E. Gang Company
Cincinnati, Ohio

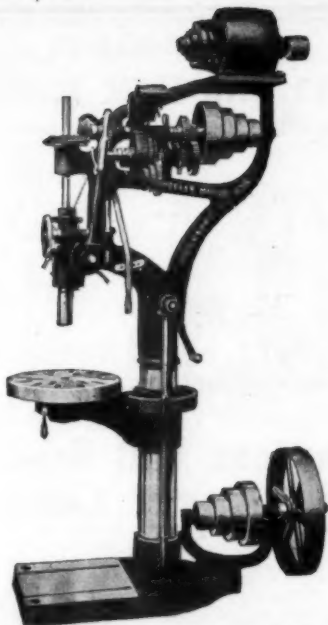
Rockford Gang's



They not only drill, but they bore ream, tap and face without removing work from jig.

Write for descriptive matter

Rockford Drilling Machine Company
Rockford, Ill., U. S. A.



21 inch Geared Feed, Motor Driven

Hoefer Drill

One of our complete line, noted wherever machine tools are used for the extreme accuracy of their work. The reason for their high reputation is found in the pains we take in making them. We have designed and built special tools to shape and finish parts where ordinary tools and methods are not sufficiently exact to satisfy us. The result is worth the trouble, because it puts accurate and economical drilling within reach of every manufacturer and machine shop:

Our catalogue is worth asking for

HOEFER MFG. CO. 116 Jackson Street
FREEPORT, ILL.

Large and Small Drills GROUND WITH EQUAL ACCURACY

And Without Special Attention or Adjustment



The
Automatic
Lip Rest
of the



American Drill Grinder

brings each drill to its proper position in relation to the grinding wheel, resulting in correctly ground points for drills of every size. The secret is in keeping the cutting edge vertical, which insures the right clearance in each case. This is a patented improvement, found only on the American. It is not the only one. The adjustable bearings for the drill holder and its rigid support, the safety wheel chuck and the automatic safety stop, combined with other distinctive features, make it the only really scientific machine for grinding perfect drill points.

*The economy of it is
past question*

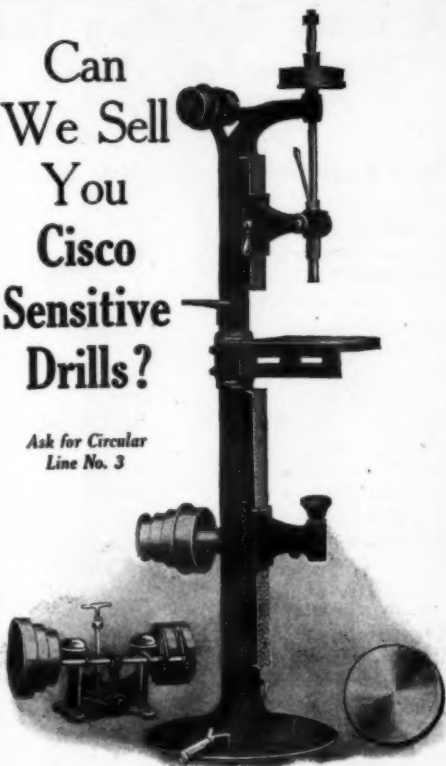
The Heald Machine Co.

25 New Bond St., Worcester, Mass.



Can
We Sell
You
Cisco
Sensitive
Drills?

*Ask for Circular
Line No. 3*



The Cincinnati Iron & Steel Co.
Cincinnati, U. S. A.

Machinery and Equipment Department

A Handy Tool-Room Tool

*For Milling and Drilling at any angle
and in any position without
resetting the work*

No. 1 Knight Milling and Drilling Machine

Does work that would require at least two ordinary machines and more than double the time, because both milling and drilling operations are completed without removing the piece from the table, the adjustments of which are such that it may be turned to any angle or position required. For making jigs, cams, dies, models, patterns, etc., it is a great time saver, and for any work that requires to be accurately milled or drilled in ways that would make it awkward to handle on ordinary machines, it is just the thing.

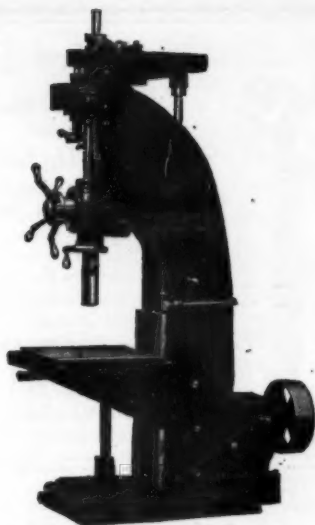


You'll want one when you know what it will do.

Let us show you

W. B. Knight Machinery Co.
St. Louis, Mo.

Something heavier? Ask about our No. 2.



For Drilling With High Speed Steel

This new 24-inch swing High Duty Drill, with a capacity for drills from $\frac{1}{2}$ in. to $1\frac{3}{4}$ in., drives high speed steel drills to their limit in solid steel. Its strong, rigid construction is clearly shown in cut. Spur gears are used entirely, except 1 pair of 2 to 1 bevel gears, and everything is driven in a straight line, with the result that practically *all* the power is transmitted directly to the drill point. This machine is reasonable in cost and it easily excels all other types in efficiency. Details?

The Foote-Burt Company,
Cleveland, Ohio.



Sensitive Drills

We make a complete line of Sensitive Drills, with

One to Ten Spindles

with or without automatic feed.

We make no extravagant claim for our drills; we do not overrate them. You get good value for your money when you buy a Reed Drill.

We have a good line of Bench Drills, and also make the old reliable line of Jordan Planer Chucks.

Reed Drill Co.

43 Hammond St.,
Worcester, Mass.

T C Are the Best Tool Holders



This straight turning Tool Holder is reversible and can be used as a right or left straight and offset side tool. Chatter troubles done away with.



The above cut shows the best cutting off Holder ever made. This is reversible. In $\frac{1}{2}$ dozen lots delivery charges prepaid.

Wm. S. Nicholls Company
251 Broadway, New York



Sibley All-Geared High Speed Drill

Send for complete catalog of power drills

Sibley Machine Tool Company
10 East Tutt St., South Bend, Ind.



Arbor Presses

Heaviest and Strongest Made

**Two Sizes Ready
Write for particulars**

**We Also Manufacture
Bench Straightening Presses
Gas Heated Soda Kettles
Drill Press Vises**

Circulars and prices?

The Cleveland Machine Specialty Co.

202-204 St. Clair Ave. N. E., Cleveland, Ohio

NEW WILLIAMSPORT QUICK CHANGE SPEED

14-inch Friction Drills

**With Spindle Speed Under Absolute
Control. A new Idea in Drills**

The advantage of a spindle speed that is instantly variable by means of a slight lateral movement of the feed lever, is obvious; the breakages due to wrong spindle speeds are entirely eliminated, and the drilling is done at the right speed. The spindle of the Williamsport stops and starts automatically as feed lever is raised and lowered. Ball bearing thrust, counterbalanced table, easily centered at any point, special leather fiber friction, with ample power for high speed steel, make this an exceptional tool in every detail.

It makes for Speed and Economy in Drilling

Let us mail you folder



VILLINGER MFG. CO., Williamsport, Pa.

There Is Money To Be Saved The *Avey* Drill

will Cut a Big Hole in
your drilling time.

It is Ball Bearing through-
out--and for High Speed
work.

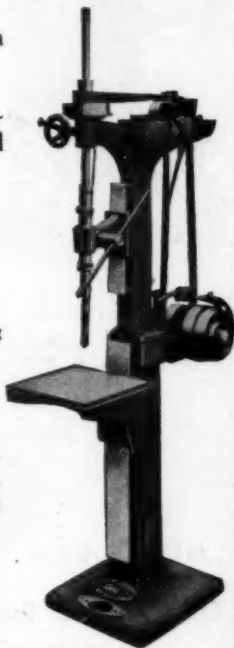
*The Spindle is larger
The Belts are wider
It has more feed*

Than any other Ball Bearing
Drill Press on the market.

It has a whole lot of con-
veniences that no others have,
all very important and saving
much time in adjustments.

Compare with any.

*Get the best--it
saves you money*



The Cincinnati Pulley Machinery Co.
Cincinnati, Ohio



ONE! TWO!

That's all the adjustments it takes before you are ready to grind your drill.

It takes just about as long as to count two, too.

And a bright boy can do perfect grinding if you use a

NEW YANKEE DRILL GRINDER

If you are prejudiced against drill grinders, it's probably because you've seen the other kinds, where you have to caliper each size of drill and make a dozen adjustments before you are ready to do your grinding.

A New Yankee saves time in grinding over hand work; saves breakage and wear in drills; increases the speed of drilling work and insures its accuracy.

Let us talk it over with you. They cost only a trifle. We also make superior and convenient

SURFACE GRINDERS

and

CUTTER AND REAMER GRINDERS

Catalogues free

Wilmarth & Morman Company,
575 Canal St., Grand Rapids, Mich.

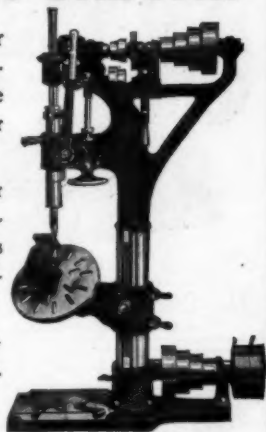
For \$59⁵⁰ You Can Get a Modern 20" Drill Press

Equipped with lever feed, quick return stationary table, square base. Guaranteed for accuracy.

This tool is built for business. Used in repair shops, garages and large manufacturing plants.

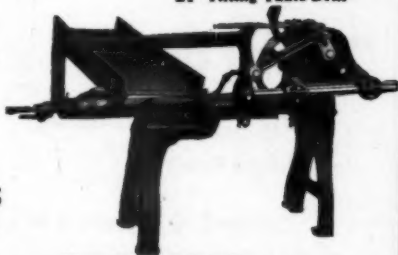
They are the greatest value in Drills today.

Get circular at once



21" Tilting Table Drill

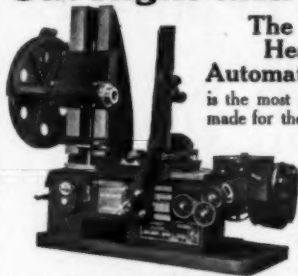
**Royal
Power
Saws
Five
Sizes
From
4 to 15
Inches**



Manufactured Only By

FRONTIER IRON WORKS
Letchworth and Grant Sts., Buffalo, N. Y.

Spur Gears Cut Right and Rapidly



The Cincinnati Heavy Duty Automatic Gear Cutter

is the most highly developed tool
made for the cutting of spur gears.

Automatic in its accuracy, exceptional in its convenience and adjustments, with ample power for the most severe service, it is a tool that every one who cuts spur gears ought to know about.

*Send us your address and we'll
send the information*

The Cincinnati Gear Cutting Machine Co.
Colerain Ave. and Elam St., Cincinnati, Ohio



"Euclid Cranes"

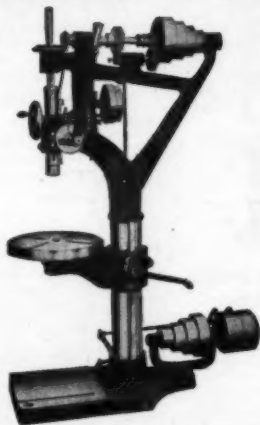
Electric and	{	Traveling
Hand Power		Jib
		Special

Designed and Manufactured By

THE EUCLID CRANE & HOIST CO.
EUCLID, OHIO

A new firm composed of old timers

Accurate Machine Tools



Davis 20-Inch Drill

Furnished with Back Gear, Power Feed, Automatic Stop and Quick Return.

A first-class high-grade tool at a reasonable price.

Orders can be sent to us direct or through leading machinery dealers in all parts of the world.

For further particulars address

The W. P. Davis Machine Co.

Rochester, New York, U. S. A.

Special Wood Working Tools

For Pattern Shops

Machines selected for their precision, and adjustability. Built like machine tools, and designed primarily for pattern shop service.

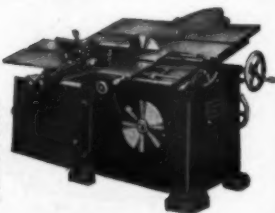
"West Side" Band Saw

Steel wheels, which can neither break, warp, twist or spring; under cut hubs; self-oiling bearings; brass-bushed loose pulley; tilting table; all adjustments made by operator without leaving his position. A band saw widely known for its superiority of design and construction.



Universal Double Saw Arbor

The best word in saw tables for accuracy and convenience. Gauges and adjustments for every possible requirement. A notable improvement upon a type of saw table conceded to be indispensable in every pattern shop.



Porter 20-Inch Jointer

The highest grade jointer or hand planer in market. Patented guard and safety cylinder; specially grooved tables.

We outfit pattern shops complete, guaranteeing the accuracy and efficiency of every tool. Whether you want a full equipment or a single machine, you will find our service helpful.

We shall be pleased to have you consult us

Chicago Machinery Exchange

Manufacturers' Exclusive Representatives

159-161 North Canal Street, Chicago

Can furnish used machines, if desired, carefully rebuilt in our own shops and fully guaranteed.



The Skinner Improved Reamer Stand

is especially designed for holding work to be hand reamed, and can also be used to advantage in the erecting room for assembling work. The Stands are furnished with any size or style of chuck, which can be detached from the Stand and used on a lathe or boring mill if desired.

Price on application

The Skinner Chuck Co.

**94 Reade St.,
New York City**

**Factory:
New Britain, Conn.**



The United States Turning Tool

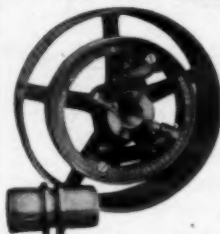
is a "winner" for all around work. The head is low, cutters are of self-hardening steel and designed for rapid and economical work. It has a solid support on the Sides of the cutter—insures heavier cut than any other holder of the same size. Saves its cost several times in a single month.

Send today for catalogue.

The Fairbanks Company

Springfield, Ohio

Edgemont Friction Clutch Pulleys



are made to stand the hard use and abuse caused by the use of high speed steel.

Look over your countershafts and you will find a clutch that does not deliver the power your machine is built for; then have us ship you a clutch that *will pull*.

Adopted by the leading Machine Tool Builders; let us tell you who they are.

Friction Clutches and Extended Sleeve Clutches for all purposes.

Our catalog for the asking

The Edgemont Machine Co., Ft. of Mound Street,
DAYTON, O.



The Lincoln Variable Speed Motor

**Meets the Machine Tool User's most
Exacting Requirements**

It is simple and compact, develops its full rated capacity at all speeds, stands heavy overloads, maintains any set speed constant under changing loads, and shows a high efficiency.

The simple *mechanical* method of speed control, which consists in shifting the motor armature, appeals strongly to the man in the shop. It avoids the troublesome electric controller and complicated systems of wiring.

This motor can be installed in any shop having the ordinary two wire d. c. circuit. Its installation and operation is just as simple as any shunt wound constant speed motor—*No controller is used.*

Ranges in speed as great as 1 to 20 are quickly and easily obtained. Our method makes available an *unlimited* number of running speeds within the range of the motor.

By selecting a motor of proper speed range for any machine you will readily see that it is possible to obtain an unbroken range of spindle speeds or cutting strokes. This means ample power and the correct cutting speed for every operation—in other words, *maximum output.*

We are prepared to furnish all types of motors for the complete equipment of machine shops. We will also design and manufacture all brackets, gears, etc. for converting your belt driven tools to motor drive. We are specialists in this work and shall be glad to offer suggestions as to the best method of installing motor drive in your plant.

Our folder 10-L contains some interesting information for the machine tool user—Shall we send one to you?

Reliance Electric & Engineering Co.

709 Caxton Bldg., Cleveland, Ohio



Caps Won't Jar Off Of Tucker's Positive Lock Compression Grease Cup

For automobiles and all kinds of machinery having excessive vibration. Sample sent by mail on receipt of cash, check or money order.

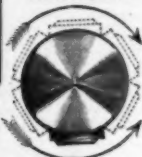
Made in three sizes

			Price
No. 000	$\frac{3}{8}$ in.	$\frac{3}{8}$ in. pipe	\$0.50
No. 001	$\frac{1}{2}$ in.	$\frac{1}{2}$ in. pipe	0.60
No. 014	$\frac{3}{4}$ in.	$\frac{3}{4}$ in. pipe	0.70

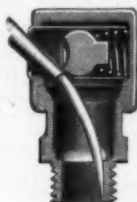
PATENTED JANUARY 11, 1910

Tucker's Oil Hole Covers

No. 5 Style B

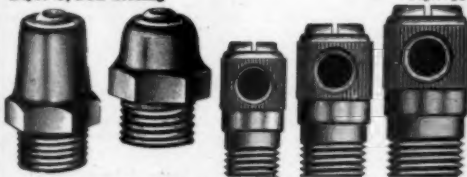


Self Closing



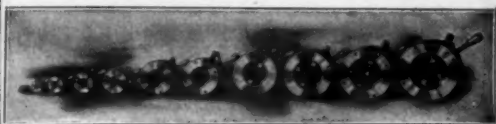
Style C, Self Closing

Style A



Send for Catalogue of full line

W. C. & F. C. Tucker, Hartford, Conn.



Some People Think!

it necessary to buy a special machine on which to cut coarse pitch Acme or square screw threads, but this is not a fact, for the

Geometric Style "D" Die Heads

when applied to a suitable Screw Machine or Turret Lathe, make the very best possible equipment for cutting any diameter, form or pitch of screw thread; and it does not tie up a lot of money, either, for the equipment.

**Geometric Die Heads are a Big
Saving at Small Cost.**

Shall we tell you more about them?

The Geometric Tool Co.
New Haven, Conn., U. S. A.



The Principle of

USING THE DRILL
AS AN ARBOR
PRESS



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336

le of the Greenerd ARBOR PRESS Is Right

Mechanics the world over for years have known
, and have used the principle, finding sometimes
upright drill to be the nearest mechanical device
what they wanted, but it was left for Greenerd
design a press that would have ample power and
and the hard abuse which a press of this kind is
to receive.

Thousands of GREENERD ARBOR PRESSES
in use everywhere; paying for themselves over
over again.

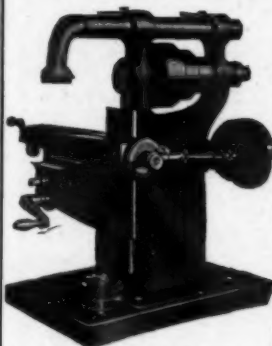
Of course you have some, but are you using all
you profitably can?

MADE BY

EDWIN E. BARTLETT

336 A STREET, BOSTON, U. S. A.

Burke's Bench Miller



No. 4 Milling Machine

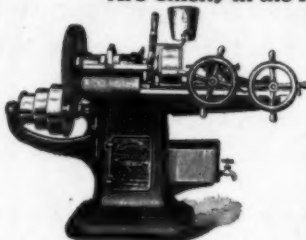
A Seasoned Tool

The tool to buy if you want extreme accuracy and permanent alignment five years hence as well as now. In making this miller the greatest care is taken thoroughly to season all castings both before and after machining. We carry these frames and parts from six to eight months after work begins on them before the final finishing is done. The result is a tool that is accurate and will stay accurate as long as you use it. For precision work it has no equal.

Longitudinal feed, $\frac{3}{8}$ in.;
traverse feed, $\frac{1}{4}$ in.; vertical
motion of knee, $\frac{3}{8}$ in.;
table surface, $3\frac{1}{2} \times 16$ inch.

BURKE MACHINE CO.
Conneaut, Ohio

The Merits of the Merriman Standard Bolt Cutter Are Chiefly in the Head



And they are:—
Simplicity — only four parts.
Durability — needs but few repairs.
Solidity of Dies — which is absolute.
Square Bearing of Dies in the Ring.
Uniformity — every bolt the same size.
Economy — the lowest labor cost.
Rapidity — several times that of ordinary machines.

They are in use all over the world, their superiority having been proved by actual test in every civilized country. Changed in a minute to tap nuts; easily adjustable to any size; cut V, square or ratchet threads with equal facility. Made for bolts from $\frac{1}{4}$ to 4 inches.

Our Catalog also shows Bolt Threaders, Bolt Pointers and Nut Toppers

Write for a copy

H. & B. BROWN CO., - East Hampton, Conn.

Oil Grooves Milled

On the Drill Press



Entirely within
the Journal

Preventing oil from
escaping at either
end

Grooves start inside the jour-
nal and may be milled to
any desired length

How it is done

National Oil Groovers

Mill smooth, straight
oil grooves that will
lubricate uniformly.

Simple as drilling
a hole, and done in a
fraction of the time
taken to chip a groove.

Does away with
the filing or reaming
that necessarily must
follow a chipped
groove.



What it does

National Oil Groovers and Keyseat Millers

for all jobs of internal oil grooving and keyseating

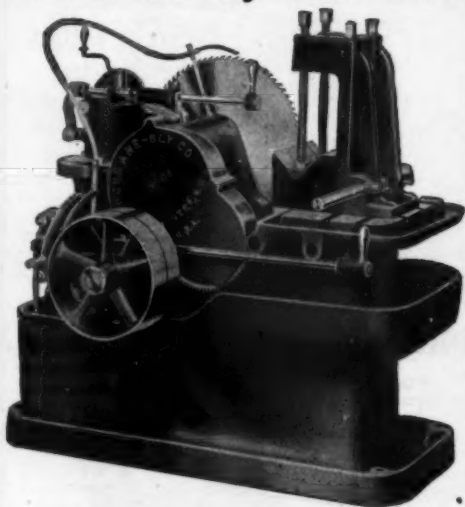
Write for new catalogue.

National Machine Tool Co.

128 Longworth St.

Cincinnati, Ohio.

The Latest Design
Cochrane-Bly Cold Saw



No. 4-B 6' Size

Has four changes of Automatic Feed,
Automatic Trips, Automatic Quick Return.

Vise holds Round, Square or Flat stock,
also I-Beams up to 12". Equipped with large
drip pan, oil tank and pump. A most con-
venient and efficient machine, durably con-
structed. Price attractive. Ask for Catalogue.

Manufacturers of:

Metal Sawing Machines (six sizes), Saw Sharpening Machines, Die Filing Machines.

Cochrane-Bly Co., Rochester, N. Y., U. S. A.

Notching and Breaking High Speed Steel

Is Slow, Wasteful and Expensive

From 10 to 20 per cent of the material is lost and it takes from 15 to 30 minutes to grind the broken ends into shape.

The Abrasive Metal Cutter Saves the Material and the Time

Pieces $\frac{1}{2}$ -inch square are cut off to exact lengths, square and true, in 10 seconds.

Handles other things troublesome to cut by ordinary methods with

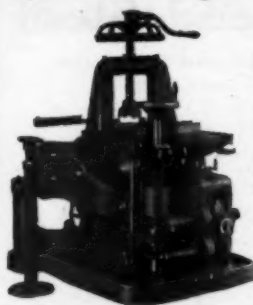


equal speed and perfection. Steel, nickel and brass tubing, flexible brass and steel tubing, or tubing filled with rubber, webbing or woven wire, are all cut with perfect accuracy, without waste, the ends being left square and smooth.

*If you have to cut bar stock
up to 1 inch, or tubing to
1½ inches, find out just
what we can do
for you*

Slack Mfg. Co.
Springfield, Vt.

Note the Sprocket Drive



of the

Lea-Simplex Cold Metal Saw

It prevents destructive back-lash, and gives a much larger cutting area.

For all the features of this saw get our new 1910 folder, "Vital Points," sent free.

Lea Equipment Company

90 West St.,

- - - NEW YORK CITY

A 12 INCH SAW

Screw Feed and Ball Bearing Thrust

Cuts 3x5 or
1-2x9 inch.

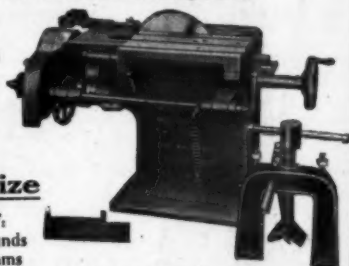
Power Friction
Feed.

Automatic
Knockout.

Large Clamp-
ing Table.

20 in. Size

CAPACITY:
5 $\frac{3}{8}$ Inch Rounds
12 Inch I Beams



Reasonable in price

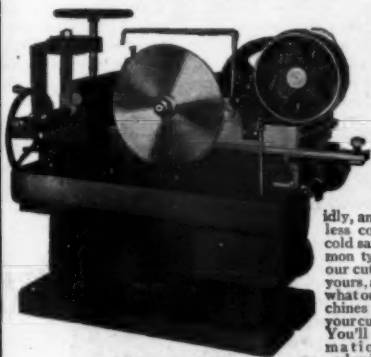
Write for particulars

Burke Machine Co., Conneaut, Ohio

The Cheap Way to Cut Steel

As well as the Quick Way

A saw with the right kind of teeth and the right kind of a machine behind it

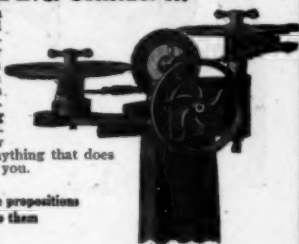


We do things with our No. 84 machine because we can use a thin saw, and drive it at the speed that gives it the highest cutting effect. This means that bars of any shape are cut more rapidly, and therefore at less cost, than with cold saws of the common type. Compare our cutting time with yours, and get an idea what one of these machines would save on your cutting off work. You'll find the information interesting and valuable.

The Economy of Correctly Shaped Saw Teeth

Did You Ever Consider It?

A machine like this, which automatically shapes and sharpens the teeth of metal saws, will increase your cutting output so much that it will save more than a man's wages. It bevels every other tooth on opposite sides, relieving it, which prevents clogging and makes the saw cut easier and faster. Anything that does that will make money for you.



These are worth while propositions
Better look into them

Nutter & Barnes Company

326 A Street, Boston, Mass.

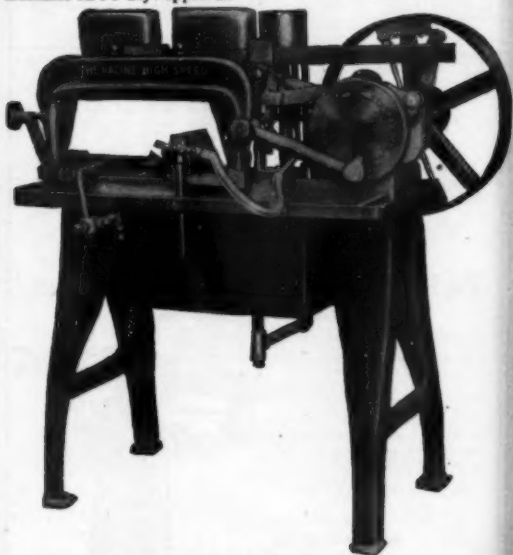
Facts Worth Considering

7½ cents is the cost of a blade that will cut off 50 pieces of 3 in. round steel on our High Speed Power Hack Saw Machine. This machine consumes less than 1-16 inch in making a cut, therefore, enough material is saved that will more than cover the cost of the blade.

Making 50 cuts, saving 1-16 in. on each, 6 pounds of material is saved at 2 cents per pound, which is 12 cents, and the blade cost 7½ cents.

Cutting High Speed Steel, costing from 75 cents to \$1.00 per pound, and saving 1-16 in. on each cut, which means a saving of 8 to 10 cents on each cut, this will cover the cost of our machine in a very short time.

To convince you of the above facts, we will send one of these machines on 30 days approval.



Let us send you a list of a few firms who have repeated their orders from time to time. Some of them may be neighbors, which will enable you to see our machine in operation.

RACINE GAS ENGINE CO., Dept. 9, RACINE, WIS.

ng
of 3 in.
This
erefore,
e blade.
is saved
6 cents.
pound,
10 cents
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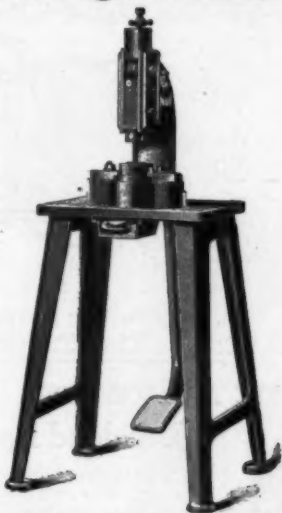


ted their
s, which

NE, WIS.

No. 1 Tool Press

For Light Punching



For the manufacture of novelties from sheet metal, and for operating a variety of cutting, forming and perforating dies, requiring an accurate press of light power. The machine has exceptional strength and capacity for its size, handling readily punchings up to one inch in No. 16 brass. Carefully adjusted to secure accurate working of the dies and to prevent shearing. Pendulum action of lever gives a stroke of maximum power without fatiguing the operator. Material and workmanship the best. Twenty running in one factory.

Get the price; you'll like it

E. O. Partridge

2047-9 W. Lake St., CHICAGO

Bench Grinders, Floor Grinders and Tapping Machines

Cut Down Your Oil Expense With a Curtis Extractor

There's No Easier Way to Save Money

When at a nominal cost you can take oil from your turnings and chips that you would otherwise have to buy and pay for, isn't it wicked not to do it? You don't have to invest much to start this economy, and once begun it continues as long as your machines go on making chips and using up oil in the process. It is a simple machine, strongly built; anybody can run it; and it will last so long it will pay for itself a hundred times over.



Pan
Holds
24
Quarts

Made in
Two Sizes

Every day's delay is a loss to you. Take it up Now

Curtis Oil Extractor Company
95 Foster St., Worcester, Mass.

Grant Riveters Are Dividend Earners



That's what we have been told by one of our many satisfied customers who has saved about \$4,368. in one year, on an investment of \$100.

Not only that, but the appearance of their work has been so greatly improved that their goods sell at sight.

Catalog will be sent on request

**The Grant Manufacturing
& Machine Co.**

Bridgeport, Conn., U. S. A.

Screw Slotting Made Easy

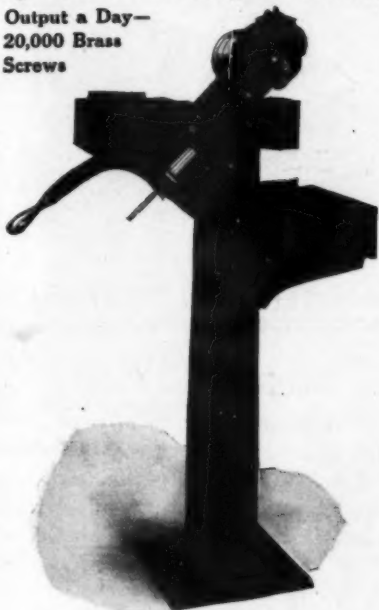
Light, Rapid and Convenient

Only One Handling of Screws—

Output a Day—

20,000 Brass

Screws



Garvin No. 1 Rapid Screw Slotter

Capacity $\frac{1}{4}$ " to $\frac{1}{2}$ "

IMMEDIATE DELIVERY

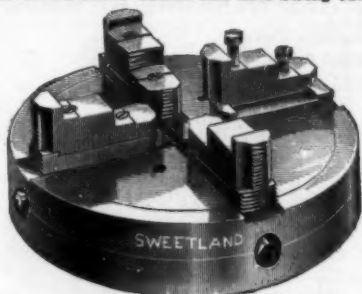
Manufactured by

THE GARVIN MACHINE COMPANY

Spring and Varick Sts., New York City

A Combination Chuck

That Combines Two Good Chucks in One
Reversible Jawed Chucks that have Strong Jaws



THE HOGGSON & PETTIS MFG. CO., New Haven, Conn.

Machine Tool Makers

should investigate carefully the facilities offered by **Hitchcock's Machine Tool List** for reaching this trade in all parts of the country. Its circulation is specialized to completely cover *every line of manufacture* in which machine tools are used—as well as all railroad and other tool-using shops—with a thoroughness and effectiveness not equalled by any other advertising medium.

This Watson-Stillman Hydraulic Jack



is just what your shop and erecting men are looking for—a light small jack, one that is easy to carry around, one that goes into small space, but is powerful enough to handle heavy loads safely.

These jacks afford the best means of lifting a heavy machine tool or piece of power plant apparatus for setting on foundations, etc.

Our line includes more than 450 types and sizes. Tell us what you expect to use jacks for and we will suggest something suitable for your work.

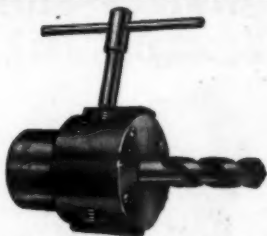
We also make hydraulic presses, Punches, Accumulators, Benders, Shears, Pumps, Valves, Fittings, etc.

Write for catalogs

The Watson-Stillman Company

Church & Fulton Sts., New York.

The Union Drill Chuck



This Chuck is made in seven sizes, holding drills from $\frac{1}{4}$ to 2 in. and has positive drive plates at the back, to relieve the strain on the jaws.

Manufactured By

UNION MFG. CO., New Britain, Conn.

26 Cortlandt St., New York
Makers of a complete line of CHUCKS

Common Chuck troubles overcome by using
Chucks that have "our"

Hardened Steel Bushings

"Independent"



**Four Jaw
Chucks**

PATENTED AUGUST 2, 1909

THE CINCINNATI CHUCK CO., Cincinnati, Ohio

Chicago Branch:
• 559 W. Lake St.

New York Branch:
136 Liberty St.

Rogers' "Talks"



Fixed Caliper Gauges Class B

We regularly make these "double-enders," i. e. for inside and outside calipering, from $\frac{1}{4}$ to 6 inches by sixteenths. Strictly high grade steel goes into them, and workmanship at least good enough to let us guarantee that they shall not vary from absolute accuracy more than 1-10,000 of an inch.

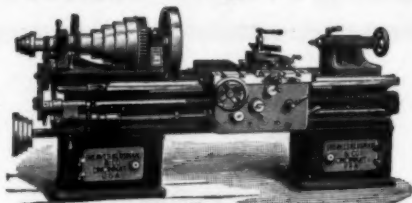
Points and heels are carefully hardened, and their whole "get-up" is what we have taught people to expect of anything marked "Rogers."

Shall we mail you our Small Tool Catalogue? You might find it interesting—many do. We can furnish special Caliper gauges of any desired size.

No. 8.

The John M. Rogers, Works
Gloucester City, N. J.

Standard Engine Lathes



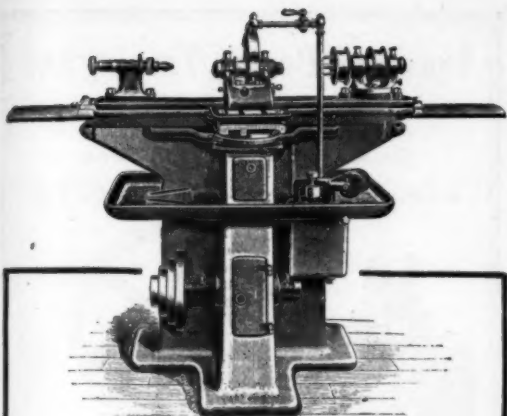
Simple Accurate Powerful Convenient

Furnished with either standard 5-step cone or with 3-step cone double-back-geared, **carrying a wide belt**, with 18 speeds and wide feed range.

GREAVES, HLUSMAN & CO
Cincinnati, Ohio, U. S. A.

WHEN YOU INQUIRE

of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are human; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.



Back View
10x24 inch, Universal

Iroquois Grinders

For the rapid and economical grinding of work which requires to be finished to .001 of an inch, these machines are showing results which draw the most enthusiastic praises from users. Their design is simple; their construction in accordance with the highest standards of modern practice. We have succeeded in keeping emery dust out of the bearings, insuring smooth running and a durability not found in many tools of this type. The Iroquois grinders are pretty nearly fool proof, and may be safely handled by ordinary operatives. Table movement is guaranteed within .001 of an inch for any stroke down to one-half inch.

We make plain grinders also, and have both in stock for prompt shipment.

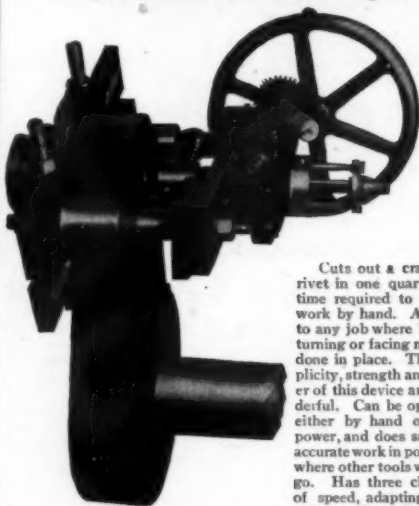
Expert advice on grinding for the asking

Iroquois Machine Company
Providence, R. I.

Universal Boring, Turning and Facing Machine

Crank Pin Rivet Head Facer

A Simple, Effective, Portable Repair Tool



Cuts out a crank pin rivet in one quarter the time required to do the work by hand. Adapted to any job where boring, turning or facing must be done in place. The simplicity, strength and power of this device are wonderful. Can be operated either by hand or with power, and does smooth, accurate work in positions where other tools will not go. Has three changes of speed, adapting it to either medium, heavy or

light work. You are sure to find some new use for it every day—and in each case it will save you money—sometimes a lot of it.

We make Portable Tools for all sorts of machine work. Write for Catalogue.

H. B. Underwood & Co.
1022 Buttonwood St., Philadelphia, Pa.

Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

FOR SALE BY

Frevort Machinery Co., 18 Day St., New York City.

Drawing press, Bliss No. 4, 15,000 lbs.
Drawing press, Bliss No. 4 $\frac{1}{2}$, 17,000 lbs.
Drill, 34 in., sliding head, back geared, power feed.
Hammer, 500 lb., drop, board lift.
Pinion and gear cutter, No. 1 Slate, automatic.
Power press, Waterbury, 6 in. stroke, with 42 in. 600 lb. fly wheel.
Profiler, Garvin, 1 spindle.
Punch press, capacity 9-16 in. in 9-16 in., hand power.
Screw machine, No. 1 Brown & Sharpe, automatic, 13-32 in. capacity.
Screw machine, No. 2 Brown & Sharpe, automatic, 21-32 in. capacity.
Shaper, crank, 15 in. Acme.

FOR SALE BY

Frank Toomey, Inc., 127 N. Third St., Philadelphia, Pa.

MILLING MACHINES.

No. 1 $\frac{1}{2}$ Cincinnati, universal.	No. 1 Brown & Sharpe, universal (2).
No. 2 Cincinnati, universal.	No. 2 Brown & Sharpe, plain (3).
No. 1 Brown & Sharpe, plain.	

BORING MILLS.

10 ft. Betts, vertical.	42 in. Colburn, vertical.
72 in. Colburn, vertical.	72 in. Horizontal Newark machine.

HAMMERS AND RADIAL DRILLS.

1500 lbs. Bement & Miles d. f.	250 lbs. Morgan s. f.
750 lbs. Bement & Miles d. f.	42 in. Bickford radial
1000 lbs. Chambersburg, drop.	36 in. American radial.

FOR SALE BY

Western Machinery Co., 6th & Baymiller Sts., Cincinnati, O.

DRILLS.

21 in. Modern, wheel & lever feed.	4 ft. universal radial, plain.
22 in. Pratt & W., b. g. & p. f. (5).	

LATHES.

15 in. Warner & Swasey, turret, with chasing ba.	16x8 Blaisdell, hollow spindle.
15x6 LeBlond, hollow spindle.	18x8 Steptoe, solid spindle.
15x6 Flather, hollow spindle.	20x7 Bradford, hollow spindle.
16x8 Flather, hollow spindle.	21x9 Pratt & Whitney, hollow spindle.
16x4 $\frac{1}{2}$ Warner & Swasey, automatic turret.	24x12 Shepard, hollow spindle.
	33x13 New Haven, solid spindle.
	30x15 $\frac{1}{2}$ New Haven, solid spindle.

PLANERS.

20x20x5 Pratt & Whitney.	26x36x14 Niles.
26x26x8 Pratt & Whitney.	

SHAPERS.

16 and 20 in. Steptoe, crank.

MISCELLANEOUS.

Glue-boiler, 5 gallon.	Swing saw.
Hammers, helve, 25 lb. Bradley (2).	Turret lathe, 15 in. Warner & Swasey, hollow spindle.
Pipe machine, 4 in. Borden.	

ECOND-HAND MACHINERY

FOR SALE BY

Marshall & Huchart Machinery Company.

**11-13-15 N. Canal St., Chicago. 45-47 S. Capitol Ave., Indianapolis.
908 N. Second St., St. Louis. 611 Pabst Bldg., Milwaukee.**

BOLT CUTTERS.

1½ in. Economic, single head, complete set of dies, tap, chuck, countershaft.

BORING MILLS.

30 in. Bullard, swivel turret head, three jaw combination chuck.
42 in. Bullard, one swivel turret head, three jaw combination chuck.
14-20 ft. Niles extension boring and turning mill, two heads.

DRILLS.

4 ft. Bickford improved plain radial, plain table, geared box drive.
20 in. Barnes, round base, wheel and lever.
40 in. sliding head upright drill.
40 in. stationary head upright drill.
Baker style "F," 8 in. spindle feed.
3 ft. Economic plain radial, cone drive, box table, tapping attachment.

LATHES.

14 in. x 6 ft. Lodge & Davis, hollow spindle, plain rest, automatic revolving turret on shears.
21 in. x 8 ft. Blaisdell, plain rest, hollow spindle, chuck.
Pratt & Whitney bench lathe, collets and swivel rest.
18 in. x 6 ft. Lodge & Davis, hollow spindle, plain rest, 12 in. chuck.
25 in. x 12 ft. Johnson, with solid spindle, swivel rest.
26 in. x 10 ft. Pond, solid spindle, plain rest.
26 in. x 12 ft. Reed, solid spindle, compound rest.
28 in. x 26 ft. Ames, triple geared.
36 in. x 18 ft. Fifield, triple geared, 30 in. chuck.
42 in. x 16 ft. Ames, triple geared, raising blocks to swing 61 inches.
56 in. x 22 ft. Featherstone, triple geared, compound rest, power cross feed.
28 in. Pond, rigid turret lathe.
30 in. x 12 ft. Gisholt turret lathe, taper attachment, power rapid traverse to turret.
42 in. New Haven turret lathe.

MILLING MACHINES.

No. 6 Grant, (Lincoln type).
No. 3 American, plain, rebuilt.
15 in. x 8 ft. Keystone slab miller.
No. 6 Whitney hand miller.

PLANERS.

22x22 in. x 5 ft. Whitcomb-Blaisdell, one head on cross rail.
24x24 in. x 6 ft. Ohio, one head on cross rail.
24x24 in. x 7 ft. New Haven, one head on cross rail.
27x27 in. x 7 ft. New Haven, one head on cross rail.
28x28 in. x 7 ft. Wheeler, one head on cross rail.
30x30 in. x 7 ft. New Haven, one head on cross rail.
36x36 in. x 10 ft. Pratt & Whitney, one head on cross rail.

MISCELLANEOUS.

Carpenter benches, one lot of.
Gear cutter, 33 in. Gould & Eberhardt
Hack saw, No. 4 Q. & C.
Hammer, 800 lbs. Monaghan, steam.
Keyseater, No. 2 Baker.
Notching press, 36 in. Ferracutz.
Screw machine, 8 in. Cleveland auto.
Screw machine, 8 in. 2. & W., auto.
Shaper, 17 in. Barker & Chard.
Shaper, 18 in. Jungst.
Shaper, 24 in. Steptoe.

Shaper, 32 in. Walcott.
Slotter, 10 in. Putnam, circular table.
Sprue cutter, Stiles-Morse.
Tapping machine, 4 in. Baker, 10½ in. spindle feed.
Trimmer, No. 4-A Fox, bench.
Trimmer, No. 6 Fox universal.
Tube cutter, Fox.
Turret lathe, Potter & Johnson automatic.

The above comprise only a partial list of the machines which we have to offer. Send for our complete second-hand list.

See our demonstrating room.

SECOND-HAND MACHINERY.

FOR SALE BY

Hill, Clarke & Co. of Chicago,

Chicago, Ill.

ENGINE LATHES.

16x6 Blaisdell.....	\$ 290
16x6 Blaisdell.....	275
16x6 Reed.....	275
16x7 Blaisdell.....	310
17x6 Blaisdell.....	330
17x6 Blaisdell.....	275
17x6 LeBlond.....	290
17x6 Blaisdell.....	250
17x7 Blaisdell.....	340
17x8 Blaisdell.....	340
17x8 Fitchburg.....	200
18x7 New Haven.....	375
18x7 New Haven.....	375
18x8 New Haven.....	380
18x8 Blaisdell.....	400
18x8 LeBlond.....	425
18x8 Schumacher & Boye.....	400
18x10 Schumacher & Boye, with 2 h. p., 2 to 1 variable speed d. c. motor, c. rest, p. c. f., 1 1/2 in. hollow spindle.....	475
21x8 Blaisdell.....	450
22x8 Blaisdell, with taper attach- ment.....	535
22x10 Draper.....	550
22x10 Flather.....	475
22x10 LeBlond.....	500
28x11 Draper.....	900
28x12 New Haven.....	650
32x13 Putnam.....	750
32x14 Pond.....	900
32x14 Fifield.....	875

DRILLS AND BORING MACHINES.

6 spindle Quint turret drill.....	\$ 75
3 spindle Fox drill.....	80
26 in. Barnes drill press.....	135
35 in. Blaisdell drill press.....	200
5 ft. Prentice plain radial drill.....	850
No. 6 Haush radial drill.....	1,200
32 in. Niles upright drill press.....	175
3 1/2 ft. Morris radial drill.....	400
42 in. Bullard vert. boring mill.....	1,200

GRINDERS.

No. 2 Diamond, wet.....	\$ 40
Emery stand.....	25
Becker cutter grinder.....	300
Gisholt tool grinder, with tool holder and water attach.....	100
No. 16 Landis, plain.....	900

MOTORS.

3 h. p. General Electric Co.....	\$ 80
1 1/2 kilowatt Milwaukee dynamo.....	100

PLANERS.

30x20r Smith & Silk, with ex- tension housing to take 42 in. platen 2 1/2 in. wide, automatic cross and vertical feed, 1 head on cross rail.....	\$ 800
48x18x13 Powell, 2 hds. on cross rail, platen 44 in. wide, power elevating device to cross rail.....	1,750

SHAPERS.

15 in. Hendey pillar shaper.....	\$ 225
16 in. Walcott & Wood, crank, with auto. down feed to head.....	235
16 in. Gould & Eberhart back geared shaper.....	225

TURRET AND SCREW MACHINES.

13x4 1/2 Pratt & Whitney, plain head, chas.....	\$ 100
16 in. Jones & Lamson chucking lathe.....	200
21 in. Gisholt turret lathe.....	850
21 in. Gisholt chucking lathe, 6 hole turret on shears, with power feed, 220 v. d. c. variable speed motor, good condition.....	1,200
3 in. Cleveland automatic screw machine.....	250
2 in. Cleveland automatic screw machine.....	300
No. 24 Pratt & Whitney screw machine.....	240
No. 24 Garvin, double turret screw machine.....	300

GEAR CUTTERS.

No. 2 Whiton automatic gear cutter.....	\$ 400
30 in. Gould & Eberhardt, auto- matic gear cutter.....	400
36 in. Becker-B. gear cutter.....	600
48 in. Brainard gear cutter.....	750
No. 1 Pfauter automatic gear hobber, spur, worm and spiral.....	1,150
No. 1 Pfauter automatic gear hobber, for spur and worm gears.....	850

PUNCH PRESSES.

Haight & Walsh, inclined.....	\$ 125
No. 6 Stiles press.....	60
No. 1 Cady.....	125
No. 2 Stiles.....	110
No. 4A. Mossberg & G., arch.....	175
No. 2P Rudolphi & Krummel armature disc punching.....	180
No. 2P Rudolphi & Krummel armature disc punching.....	175
No. 33 Ferracute, straight sided press.....	160
No. 45 Holden, inclined.....	225
No. 68 Crosby, arch.....	225
No. 70 Crosby, open back.....	300
No. 7 Mahoning, 30 in. throat.....	625
No. 6 Eaton, back geared.....	275
No. 5 Stiles & Parker, geared.....	550

MISCELLANEOUS.

Chuck, 16 in. heavy pl. planer.....	\$ 10
Cylinder grinding attachment, for vertical boring mill.....	15
Lathe grinder, Hisey 2-speed heavy.....	40
Oil separator, Springfield.....	35
Slotter, 18 in. Sellers.....	1,200

Have you looked into our Guarantee on Used Machine Tools?

SECOND-HAND MACHINERY

FOR SALE BY

J. J. McCabe,

30 Church St., New York City.

"Second to none are our second-hand tools."

The prices will also attract attention.

Anybody here seen better tools than at J. J. McCabe's?

We sell you a good tool or not at all.

HORIZONTAL BORING MACHINES.

Double column horizontal floor boring, drilling and tapping machine, with bed-plate and all the attachments, in A-1 order, practically new; Niles Tool Works; boring spindle 3 in. diam.; floor-plate 16 ft. long, 8 ft. wide, and about 12 in. thick; boring bars 2½ and 4½ in. diam.

Boring and drilling machine, 4 in. spindle, knee type, 54 in. feed, 60 in. swing.

Boring and drilling machine, 2½ in. spindle, yoke support, Bement.

Boring and drilling machine, 1½ in. spindle, knee type, Sellers.

Horizontal floor drilling machine, capacity 2½ in. holes, Corliss.

UPRIGHT BORING MILLS.

84 in. 2 heads, Niles.

72 in. 2 heads, Sellers.

62 in. 2 heads, Niles.

54 in. 2 heads, Colburn.

42 in. 2 heads, Bullard.

37 in. 1 head, Bullard.

RADIAL DRILLS.

144 in. Western, good as new.

132 in. Sellers, heavy, Pond type.

130 in. Baush, Pond type.

96 in. Bement, full universal.

80 in. Niles, half universal.

TURRET LATHES.

41 in. Gisholt, with taper attachment,

carriage and turret.

32-50 in. Gisholt, carriage and turret.

24 in. Gisholt, carriage and turret.

27 in. American, Gisholt type.

32 in. American, Gisholt type.

SCREW MACHINES.

2½-16 in. full automatic, Pratt & Whitney, complete.

24 in. wire feed, P. & W., complete.

18 in. wire feed, P. & W., complete.

MILLING MACHINES.

No. 16 plain, table 50 in., all auto-

matic feeds, Garvin.

No. 3 plain, table 26 in., Garvin.

Lincoln style, Garvin.

Special milling machine, with 2 mill-

ing heads 8 and 14 in.

Planer type slab miller, 22x60 in.,

Ingersoll.

SHAPERS.

14 in. travel'g bd., 28 in. fd., Fitchburg.

20 in. friction geared, Putnam.

20 in. crank, Gould & Eberhardt.

26 in. crank, Juengst.

PLANERS.

54x54x16, 4 heads, Sellers.

50x50x16, 2 heads, Bement.

42x42x18, 2 heads, Niles.

36x36x11, 2 heads, Sellers.

36x36x9, 2 heads, Sellers.

36x36x8, 2 heads, Bement.

34x34x14, 1 head, Gleason.

32x32x10, 2 heads, Pond.

30x30x7½, 2 heads, Sellers.

30x30x8, 1 head, Whitcomb.

30x24x6, 1 head, Putnam.

26x26x6, 1 head, New Haven.

24x24x6, 1 head, Pond.

17x17x3, 1 head, Miles.

LATHES, DOUBLE SPINDLE.

29-48 in. swing, 16 ft. bed, geared plate, McCabe.

LATHES, TRIPLE GEARED.

84x24 Bement.

82 in. pit lathe, tailstock and carr.

54-64x36 Bement.

54x21 Fitchburg.

48x24 Fitchburg.

38x12 Gleason.

28x14 Harrington.

LATHES, BACK GEARED.

37-43x20, taper attach., American.

38x16 Putnam.

32x17 Putnam.

32x13 Pond.

30x23 Pond.

28x15 Putnam.

27x20 Pond.

26x13 taper, Bement.

26x12 Powell.

25x16 Lathe & Morse.

25x14 Blaisdell.

22x10 Pond.

20x12 Pond.

20x8 geared head, Draper.

18x8 Reed.

16, 15, 14, 13 and 12 in. swing.

BOILER SHOP TOOLS.

10 ft. bending rolls, hinged housing.

7 ft. bending rolls, hinged housing.

6 ft. bending rolls, solid housing.

24 in. punch, capacity 1x½ in.

9 in. punch, capacity 4x½ in.

SECOND-HAND MACHINERY

(J. J. McCabe—Continued.)

RAILROAD TOOLS.

Driving wheel lathe, 80 in. swing, double head, Niles.
Driving wheel lathe, 62 in. swing, double head, Bement.
Double spindle lathe, 26-48 in. swing, 14 ft. bed, McCabe.
Car wheel grinder, double head, Springfield.
Axle and centering machine, 10 in. Bement.

MISCELLANEOUS.

Bolt cutter, 1½ in. capacity, National, taps and dies.
Bolt cutter, 1 in. capacity, Acme, taps and dies.
Cold saw, 3 in. round, Lucas.
Cutting-off machine, 3 in. capacity, Pratt & Whitney, automatic feeds.
Gear cutter, spur, 30 in. Gould & Eberhardt, automatic.
Grinders, cutter and surface, prominent makes.
Keyseater, heavy pattern, Newton.
Pipe machine, 4 in. capacity, Philadelphia, dies, etc.
Slotter, 12 in. stroke, Bement, automatic feeds.

Send for our complete list of all machines in the last shop equipment No. 135.

FOR SALE BY

New York Machinery Exchange, - 50 Church St., New York City

Boring mill, horizontal, Sellers & Co., 3½ in. spindle, \$600.
Boring, milling and drilling machine, horizontal, 40 in. Beaman-Smith, \$700.
Drill, radial, Fitchburg, 6 ft. arm, geared feeds, \$800.
Hammer, 200 lb. Bradley, cushioned helve, \$600.
Lathe, 60 in. x 28 ft. Putnam, blocked to 68 in., \$800.
Lathes, turret, 17 in. x 6 ft. Pratt & Whitney, geared face drive, (3), each \$300.
Lathe, turret, Davis, new, \$650.
Lathe, flat turret, 2x24 in. Jones & Lamson, \$750.
Lathes, automatic mfg. turret, Potter & Johnston, (2), each \$1,000.
Lathe, turret, 26 in. x 10 ft. Bullard, heavy pattern, \$1,200.
Lathe, vertical, combination boring and turret, 36 in. Bullard, \$1,350.
Miller, manufacturing, Bement, \$150.
Miller, plain, Newton, back geared, \$300.
Miller, universal, No. 2 Van Norman, \$650.

FOR SALE BY

The Randle Machinery Co., - 1739 Powers St., Cincinnati, O.

BOILERS.	
Horizontal tubular, from 6 to 150 h. p., for all pressures.	Fire box, from 8 to 80 h. p.
	Vertical, from 3 to 50 h. p.
ENGINES.	
Corliss, from 50 to 350 h. p.	Throttling, from 5 to 150 h. p.
Automatic, from 25 to 180 h. p.	
LATHES.	
22 in. x 8 ft. Niles.	60 in. Stevens, pulley.
MILLER.	TOOL GRINDER.
Duplex brass miller.	Springfield tool grinder.
PLANNER.	BOLT CUTTER.
36x36 in. x 12 ft. Kidd.	½ to 1½ in. Sellers.
PIPE THREADER.	AIR COMPRESSOR.
2½ to 12 in. Eaton, Cole & Burnham, motor drive.	8x6x9 locomotive type.

MISCELLANEOUS.

Heaters, pumps, tanks, blowers, exhausters, saw mill and general machinery.
Write for list. Also a full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Ejectors. Send for circulars.

SECOND-HAND MACHINERY

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

210-212 Washington Ave.

St. Louis, Mo.

14x4 Draper, rise and fall rest.	LATHES.
26x26x6 New Haven.	25x26 New Haven shafting lathe.
16 in. Steptoe.	PLANERS.
22 in., sliding head.	30x30x8 Whitcomb.
26 in. Barnes, almost new.	SHAPERS.
	24 in. Gould & Eberhardt.
	DRILLS.
	28 in. Pond, sliding head.
	5 ft. plain radial.

MISCELLANEOUS.

Air compressor, 8x8 in., belted.	Keyseater, Morton, very large.
Air comp., 20x20 & 13x24 Norwalk.	Punch, No. 5 Long & Allstatter, 18 in. throat.
Bolt cutter, 1 1/2 in. Acme.	Punch, 48 in. throat, cap. 1 1/2 in. 1 1/2.
Boring mche., hor., Betts, 3 1/2 in. bar.	Riveter, pneumatic, 25 in. reach.
Cold saw, No. 2 Newton, 16 saws.	Rolls, 8 ft., 7 in. diam., drop end.
Hammer, 50 lb. Justice.	Rolls, 8 ft., 16 in. diameter.
Hammer, steam, 500 lb. Morgan.	

FOR SALE BY

A. D. White Machinery Co., 108-114 N. Jefferson St., Chicago.

LATHES.

9x42 in. Shepard, hollow spindle.	15x6 VonWerk, c. r. & h. s.
14x6 Fay & Scott, compound rest.	16x6 Flather comp. rest & h. s.
15x6 Schellenbach, oil pan, metric gears and chuck.	16x32x16 Fay & Scott, ex. gap.
15x6 Sebastian, c. r. & h. s.	18x12 Lodge & Shipley, pat. head.
	20x10 Powell, compound rest.

SCREW MACHINES AND TURRET LATHES.

No. 60 Brown & Sharpe, automatic, turret forming (2).	2 in. American, a. c. & w. f.
1 in. Costillo, hand.	1 1/2 in. Davis & Egan, a. c. & w. f. (3)
1 in. Cleveland, automatic.	18 in. Davis & Egan, 2 1/2 in. h. s.
1 in. Cleveland, semi-automatic.	18 in. Drees-Mueller turret lathe.
1 1/2 in. Cleveland, automatic.	21 in. Lodge & Shipley turret lathe.
2 in. Cleveland automatic.	16 in. Windsor, raised to 24 in.

DRILLS AND BORING MACHINES.

6 spindle Fox sensitive drill.	6 ft. American radial, tapp. att.
No. 2 Mechanics friction drill.	42 in. Niles mill, 2 heads, new.
28 in. Barnes, p. f. & b. g.	16 ft. Niles boring mill, 2 heads, used less than 6 months, bargain.
33 in. Cincinnati, p. f. & b. g.	

MILLING MACHINES AND GEAR CUTTERS.

No. 1 Kempsmith, univ., almost new.	36 in. Fellows gear shaper.
No. 3 Kempsmith, plain.	30 in. Brainard automatic.
No. 5 Becker vertical miller.	30 in. G. & E., automatic.

PLANERS AND SHAPERS.

16 in. Steptoe, plain crank.	30x30x10 Detrick & H., o. r.
16 in. Smith & Mills, geared.	30x30x14 American, 2 heads.
16 in. Gould & Eberhardt.	98x98x20 Betts, 1 head.

GAS ENGINE.

We offer for quick sale one 20 h. p. Columbus Gas Engine, with muffler. Has been used but a very short time and is in excellent condition, practically as good as new. Spot cash, \$250.00. If you need an engine, get in on this quick!

MISCELLANEOUS.

Hammer, power, 50 lb. Fairbanks.	Press, No. 3 1/2 Bliss, gd., dbl. crank.
Keyseater, No. 6 Little Giant.	Press, No. 5-T. R. & K., back geared.
Press, toggle, No. 1 1/2 Bliss.	Tapping machine, 10 in. Baker.

Our latest "Yellow Book" is ready. You can have it regularly if you'll drop us a postal card.

SECOND-HAND MACHINERY

FOR SALE BY

C. C. Wormer Mach'y Co., 94-96 W. Woodbridge St., Detroit, Mich.

GRINDERS.

No. 8 Builders, emery, double end.
No. 64 Diamond, wet emery.
Diamond, emery, single end, bench.

36 in. Diamond, roll.
Gisholt, water tool.
12 in. Bath, universal.

TURRET LATHES AND SCREW MACHINES.

16 in. Bardons & O., fr. gd. hd.
16 in. Windsor, friction geared hd.
No. 6. Brown & S. screw machine.
No. 1 Garvin, screw, wire feed.
16 in. Garvin, screw.
No. 1 Pratt & Whitney, screw, pl. hd.

No. 2 Pratt & W., turret screw,
15 in. Jones & L., turret.
22 in. Gisholt, turret, with taper and
pulley crowning attachment.
24 in. Gisholt, turret.
No. 3 Pratt & W. chucking mche.

SHAPERS AND PLANERS.

10 in. traverse head.
15 in. Hendey, geared rack.
16 in. Chase, worm and gear device.
16 in. Gould & E., bk. gd. crank.
16 in. Steptoe, back geared crank.
22 in. Walcott, geared rack.
22 in. Walcott, power down feed.
24 in. Hendey, friction hd., gd. rack.
24 in. traverse hd., gd. rack.
30 in. Fox, open side.
16x16x36 Bigelow.
22x22x5 Pond.

24x24x7 New Haven.
24x24x8 Powell.
25x25x8 Lodge & Davis.
26x26x5 Gray.
26x26x6 Pond.
30x30x14 Miles, 2 heads.
31x31x9 Brettell.
32x32x8 Pond.
32x32x10 Pond.
38x38x10 New Haven.
14 ft. Sellers.
16 ft. Niles, boiler plate.

DRILLS.

17 in. style F. Baker Bros.
20 in. stationary hd., lever feed.
24 in. Bickford, back geared.
24 in. square base, sliding head.
40 in. No. 5 New Haven, back gd.
4 ft. arm, universal plain radial.

4 1/2 ft. plain radial, arm box.
52 in. McNaill, universal radial.
11 in. Norton & Jones, sensitive.
14 in. Gardam, 4 spindle, sensitive.
3 spindle Barnes, lever feed.
Woodward & R., 6 spindle, sensitive.

PIPE MACHINES.

1 to 2 in. No. 200 Oster, hand.
2 to 2 in. No. 1 Apex.
2 to 4 in. Armstrong, power.
2 to 6 in. No. 11 Jarecki, power.
1 to 6 in. No. 64 Merrill, h. & p.
2 in. Bignall & K., cutting-off att.

2 1/2 to 4 in., power.
2 to 6 in. Curtis, h. & p.
2 to 6 in., No. 110 Forbes.
2 to 8 in. No. 9 Merrill, hand.
2 to 8 in. No. 94 Merrill.
4 to 6 in. No. 88 Curtis, h & p.

PRESSES.

No. 2 Bliss, open back, inclinable.
No. 1 Cook, open back, inclinable.
No. 2 Cook, open back, inclinable.
No. 12 Etna, open back, inclinable.
No. 3 Gordon, open back, inclinable.
No. 52 Toledo, plain, open back.
No. 51 Ferracute, solid back.
No. 84-A Michigan, double crank.

No. 3 Greenerd, arbor.
Geared punch, 1 1/2 in. stroke.
Forming press, 3 in. stroke.
Horizontal bending press.
Horizontal wheel press.
Wheel press, heavy, gd. screw.
Sheridan die press, 3 in. stroke.
Stiles stamping press, 1 1/2 in. stroke.

MILLING MACHINES.

No. 2 Garvin, hand.
No. 2 Pratt & Whitney, hand.
10 in. feed, Berke, hand.
No. 5 Brainerd, 10 in. feed.
No. 1 Brown & Sharpe, plain.

No. 59 Bement & Dougherty, plain.
No. 7 Brainerd, Lincoln.
2 spindle, Beaman & S., motor dr.
2 spindle, special geared.
No. 1 American, valve.

HAMMERS.

40 lb. Bradley, helve.
75 lb. Dupont, upright, belt.
80 lb. Long & Allstatter, helve.

100 lb., rope lift.
150 lb. Marchand & Morgan, steam.
100 lb., board lift.

PUNCHES AND SHEARS.

1 in. str. hand punch and shear.
No. 2 Buffalo hand punch and shear.
5 in. throat, hand punch and shear.
20 in. double end punch and shear.
Hercules "A" bench punch.
No. 25 Niagara lever punch.

Blacksmith geared punch.
No. 3 Newton circular shear.
No. 205 Niagara, power circle.
No. 300 Toledo, circular slitting.
Alligator shear, blade 9 in.
Bevel shear for boiler plates.

SECOND-HAND MACHINERY

FOR SALE BY

Niles-Bement-Pond Company, 111 Broadway, New York.
Located at Chicago, Boston and New York.

LATHES.

- | | |
|---------------------------------------|--|
| 12x5 LeBlond, rise and fall rest. | 21 and 48 in. Harrington, gap, boring and chuck. |
| 14x6 F. B. Miles, compound rest. | 21x8 Star, turret carriage. |
| 16x6 speed lathe. | 22x16 Fitchburg. |
| 14x5 American, square arbor.....\$ 50 | 30x12 Johnson, triple geared, compound rest and taper. |
| 16x6 N. & W. bolt lathe, pl. rest 90 | 32x10 Pond, compound rest. |
| 18x6 Blaisdell, rise and fall rest. | |
| 19x6 D. W. Pond, turret tool post. | |
| 21x6 Bridgeport, turret boring. | |

TURRET MACHINERY.

- | | |
|---|---|
| $\frac{1}{2}$ in. No. 1 Garvin, wire feed.....\$125 | $\frac{1}{2}$ in. No. 1 National Acme, 4 spindle automatic.....\$150 |
| in. No. 0 Pratt & Whitney, wire feed. | $\frac{1}{2}$ in. No. 00 Hartford, Pratt & Whitney, automatic.....275 |
| in. No. 1 Costello, wire feed.....\$165 | $\frac{1}{2}$ in. No. 1 Spencer, single turret, automatic.....150 |
| 1 $\frac{1}{2}$ in. J. J. Ray screw machine.... 75 | 21-32x1 $\frac{1}{2}$ in. No. 2 B. & S., auto. 350 |
| 2x24 in. Jones & L., flat turret. | $\frac{1}{2}$ in. No. 2 Hartford, Pratt & Whitney, 2 spindle.....350 |
| 24 in. Conradson, semi-automatic. | |
| 28 in. size J. Gisholt. | |
| $\frac{1}{2}$ in. No. 0 Hartford, automatic.\$225 | |

SHAPERS AND PLANERS.

- | | |
|--|---|
| 15 in. Hendey, friction. | 26x23 in.x16 ft. Ferris & Niles, 2 hds. |
| 18 in. Cincinnati, dbl. hd., traverse. | 30x30 in.x24 ft. Sellers, 2 heads. |
| 18x16 in. Blaisdell, crank. | 32x32 in.x14 ft. Niles. |
| 17x17 in.x4 ft. Whitcomb. | 42x42 in.x10 ft. Pond, 4 heads. |
| 22x22 in.x5 ft. Hendey. | 72x72x24 in. Sellers. |
| 26x26 in.x6 ft. Pond. | |

DRILLS.

- | | |
|---|---|
| 9 in. No. 1 Pratt & Whitney, bench. | 5 ft. 6 in. Niles, outboard col. |
| 13 in. No. 1 sensitive friction, 110 volt, d. c. motor. | 6 ft. 10 in. Niles No. 2, semi-univ. |
| 25 in. Blaisdell sliding head. | 10 in. 2 spindle Slate, sensitive. |
| 30 in. Gould & E., sliding head. | 12 in. 2 spindle Foote-Burt, sensitive. |
| 36 in. Gould & E., sliding head. | 14 in. 3 spindle Garvin, gang.....\$ 80 |
| 48 in. Niles, sliding head. | 14 in. 4 spindle D. P. N..... 75 |
| Prentiss port. univ. rad., cap. 2 in. | 17 in. 4 spindle J. & L., gang.... 75 |
| 3 ft. Gair, plain radial.....\$300 | 14 in. 6 spindle No. 3 Garvin, gang. |
| 4 ft. 6 in. Barr, plain radial..... 200 | 6 spindle special Langelier. |
| 5 ft. Niles, semi-universal. | No. 10 10 spindle Pratt & Whitney, cap. 1 15-15 in., 220 v., d. c. motor. |

BORING MILLS.

- | | |
|--|---|
| No. 2 36 in. Brown & S., vert. turret. | Nicholson & Waterman boring machine, 3 in. spindle. |
| 37 in. Bullard, vertical, 2 heads. | Bement & Son horiz., 2 $\frac{1}{2}$ in. spindle. |
| 21 in. Pond, 3 heads. | Stearns 96 in. special cylinder borer. |
| Kelly horizontal, 2 in. spindle. | |

GRINDERS.

- | | |
|--|-----------------------------------|
| 14x2 in. Gould & E., water tool \$ 25 | Diamond polishing stand.....\$ 15 |
| 18x2 in. Pedrick, double wet tool 20 | No. 0 Northampton polishing jack. |
| 24x3 in. Pedrick, double wet tool 75 | Swing frame grinder and polisher |
| 20x1 $\frac{1}{2}$ in. Ransom, water tool. | Diamond.....\$ 45 |
| 3 in. Sellers drill grinder. | |

MILLING MACHINES.

- | | |
|---|--|
| No. 1 LeBlond, vertical, milling attachment. | No. 2 Brown & Sharpe, universal, 20x10x16 in. |
| No. 2 Smith & Garvin, hand. | No. 4 $\frac{1}{2}$ Garvin, plain, 24x9x19 in. |
| No. 4 $\frac{1}{2}$ Becker-Brainard, plain, 24x7x16 in. | No. 4 Brown & Sharpe, universal, 40x7x2 in. |
| No. 2 Garvin, plain, 31 $\frac{1}{2}$ x5x16 in. | Garvin single spindle profiler, table 21x24 in.....\$200 |
| Smith & Garvin, pl., 24x6x10 in.\$ 50 | No. 2 Garvin single spindle profiler, 14x10 in.....275 |
| No. 3 Carter & Hakes, plain, 31x6 $\frac{1}{2}$ x13 $\frac{1}{2}$ in. | $\frac{1}{2}$ in. Garvin hor. screw slotter... 40 |
| No. 3 Garvin, plain, 34x7 $\frac{1}{2}$ x17 $\frac{1}{2}$ in. | |

SECOND-HAND MACHINERY

(Niles-Bement-Pond Company—Continued.)

MISCELLANEOUS.

Arbor press, power, 3 in. screw. \$ 50	Planer vise, 16x3½ in. \$ 25
Bicycle tube hand rolls 20	Planer vise, 10x2 in., swivel base 30
Brazing furnace, gasoline, 34x16 in.	Press, bench, No. 0 Stiles pattern.
Cut-off machine, 2½ in. Betts. \$ 75	Punch and shear, combination,
Cut-off machine, 3½ in. H. & R. 50	power, ½ in. capacity. \$ 25
Hammer, power, 350 lb. Lingle.	Spiral spring winding mche., Shuster.
Iron forge on legs, 28x13x8 in. 25	Tapping mche., horiz., No. 1 Garvin.
Melting furnace, 30 gal. babbitt 25	Vulcanizer, rubber, Hartford, small

FOR SALE BY

The Cincinnati Planer Co.,

Cincinnati, Ohio.

LATHES.

15x5 Dreeses, turret.	16x16 screw, automatic.
16x6 American, taper attachment.	32x10 Bradford, not screw cutting.

PLANERS.

24x24x6 L. W. Pond, 1 head.	36x36x14 Chandler, 2 heads.
24x24x6 Cincinnati, 1 head.	48x36x14 Cincinnati, 3 heads.
28x28x8 Cincinnati, 1 head.	60x48x19 Cincinnati, 4 heads, variable speed.
30x30x14 Cincinnati, 2 heads. 1. p.	74x56x20 L. W. Pond, 2 heads.
34x24x12 Cincinnati, 2 heads.	
36x30x14 Cincinnati, 2 heads.	

MISCELLANEOUS.

Boring and drilling machine, No. 1	Drill, No. 0 Bickford radial.
Fosdick, horizontal.	Gear cutter, 60x18 in. Gould & E.
Drill, 14 in. American, sensitive.	Shaper, 15 in. Springfield, crank.
Drill, 5 ft. Fosdick, pl. radial, par. dr.	Shaper, 20 in. Steptoe, crank.

FOR SALE BY

Wickes Brothers,

West & Cedar Sts., New York City.

All have been used, but in some cases only a few months. Pick out what you would be interested in and we will submit a complete and careful description.

LATHES.

16x5 in. Prentice stud lathe, not grd.	15x8 P. & W., taper att., solid spdl.
10x4 speed lathes (2).	16x6 Bullard, comp. r., solid spindle.
13x5 Lathe & Morse, c. r., hol. spdl.	18x6 LeBlond, c. r., h.s., taper attach.
13x6 P. & W., comp. rest, solid spdl.	20x8 Jones & L., c. r., hollow spdl.
15x5 Draper, r. & f. rest, hol. spdl. (2).	22x13 ft. 6 in. Pond, c. r., solid spdl.
15x5 Lodge & Davis, plain turret.	26x8 ft. 6 in. Putnam, c. r., solid spdl.
15x6 Jones & L., r. & f. rest, hol. spdl.	30x11 ft. 6 in. Wood, pl. r., solid spdl.
15x6 Blaisdell, c. r., hollow spdl. (2).	36x15 ft. 9 in. Pond, c. r., 30 in. chuck.

SCREW MACHINES.

4 in. Cleveland, turret.	2 in. Jones & Lamson, turret.
4 in. Cleveland, turret.	Screw slotters (2).

DRILLS.

21 in. Baush, radial.	14 in. sensitive, sliding hd., power fd.
10 in. sensitive, sliding hd., power fd.	

PLANERS AND SHAPERS.

22x18x55 in. Putnam, 1 head.	34x34x10 Pratt & Whitney, 1 head.
30x30x6 Fitchburg, 1 head.	10 in. Fitchburg shaper, traverse hd.

MISCELLANEOUS.

Arbor, emery wheel, double end.	Hack saw, power.
Gear cutter, 24 in. Putnam, with dial.	Hammer, power, 150 lb., Beaudry.
Grinder, surface, Diamond.	Milling machine, Bement, plain.
Grinders, water, double end (5).	Shear, square, 22 in. Niagara, foot power.
Grinder, 30x8 Morse, automatic.	

Besides the above, a large list of machine tools will be found in our regular stock list.

SECOND-HAND MACHINERY

FOR SALE BY

Baird Machinery Co., - 23rd and Smallman Sts., Pittsburg, Pa.
BOILER SHOP EQUIPMENT.

Air compressors, Westinghouse style D.
 Air drill, 16D. Ingersoll.
 Bending rolls, 10 ft. and 5 ft.
 Expanders, from 4 in. to 6 in. diameter.
 Hammers, 400 lb. Morgan; No. 99 Imperial Ingersoll-Rand pneumatic.
 Hoists, 6 in. to 8 in. bore.
 Punches, hand screw punches from No. 0 to 4; hand shear.
 Radial drills, 5 ft. Prentice, 4 ft. Fosdick, 4 ft. Dreses.
 Riveters, hydro. pneumatic, Pedrick & Ayer, one 8 ft. gap, one 6 ft. gap.
 Shears, Cleveland bevel; Young hand shear.

FOR SALE BY

Joseph T. Ryerson & Son, - 16th and Rockwell Sts., Chicago

LATHES.

Item.	Item.
65 15x6 square arbor, brass.	145 15½ in. x6 ft. Flather.

All except item 65 with hollow spindle, power cross feed, compound rest, complete with countershaft and usual equipment.

PLANERS.

136 Sellers, 48x48x8 ft. 1 in., 2 hds.	167 Sellers, 42x42x6 ft. 6 in., 2 hds.
155 Pond, 26x26x6, heavy pattern.	168 Sellers, 42x42x6 ft. 6 in., 2 hds.
156 Pond, 26x26x6, heavy patterh.	169 Sellers, 42x42x8 ft. 6 in., 2 hds.
163 Sellers, 36x36x7, 1 head.	215 Gray, 36x36x10, 2 heads, motor drive.
164 Sellers, 36x36x7, 1 head.	216 Dieterick & Harvey, 60x60x10 open side.
165 Sellers, 36x36x7, 1 head.	
166 Bement, 36x36x7, 2 heads.	

MILLING MACHINES.

200 No. 9 Garvin, back geared.	202 No. 9 Garvin, back geared.
201 No. 9 Garvin, back geared.	203 No. 9 Garvin, back geared.

PUNCHES AND SHEARS.

75 Hilles & Jones No. 2 flat jaw, capacity 1 in. ½ in.; 36 in. throat, with 8 ft. crane and trolley, belt drive.
 219 Long & Alistatter, size A, capacity 2 in. hole in 1½ in.
 222 Henry Pels portable beam shear.
 59 Pels & Co., Johns T-30 beam shear, cap. 12 in. 35 lb. beams, belt drive.

DRILLS.

193 Drill press, sensitive, 3 spindle Foote-Burt, automatic feed.
 194 Drill press, sensitive, 14 in. Barr.
 195 Drill press, sensitive, 3 spindle Barr, distance between center of spindle 9 in., table 11x32 in.
 167 Drill press, 25 in. Hamilton, back geared
 197 Drill press, sensitive, 14 in. Woodward & Rogers.
 198 Drill press, sensitive, 4 spindle Sigourney, table 12x24 in.
 33 Drill, Cleveland suspension, capacity 3 in. hole.

MOTORS.

1-A 25 h. p. West. 220 volts, d. c., 850 r. p. m.	38 15 h. p. Schureman & Hayden.
2-A 15 h. p. West. 220 volts, d. c., 560 r. p. m.	40 6 h. p. West. crane motor, 220 volts, d. c.

MISCELLANEOUS.

213 Boring mill, horizontal, 4x27x60 Beaman & Smith.
 177 Bulldozer, Ajax No. 5, double geared. belt drive, weight 21,000 lbs.
 63 Pipe threader, Bignall & Keeler, P. D. Q. C. No. 2, ¼ to 2 in. pipe.
 191 Pipe threading machine, Forbes, 2½ to 8 in.
 192 Pipe threading and cutting machine, Borden, 2 in., capac. ½ to 2 in. pipe.
 208 Profiling machine, No. 2 Pratt & Whitney, table 12x15 in., vertical movement of head 3 in.
 210 Screw machine, hand. No. 2 Pratt & Whitney.
 183 Shaper, Springfield, 15 in.
 228 Shaper, Hendeby, 15 in.

SECOND-HAND MACHINERY

FOR SALE BY

Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.

LATHES.

- | | |
|--|---|
| 14x6 Davis, comp. rest, quick change. | 31x10 Gould & Eberhardt, compound rest, power cross feed. |
| 14x6 Lodge & Davis, compound rest. | 36x16 Reed, compound rest, power cross feed. |
| 14x6 Lodge & Shipley, patent head. | 36x16 Niles, compound rest, power cross feed. |
| 15x6 Flather, comp. rest, p. c. f. | 36x17 Bement, triple geared, compound rest. |
| 18x6 Flather, compound rest, power cross feed, taper. | 37x18 Sellers, compound rest, power cross feed. |
| 20x10 Putnam, compound rest, power cross feed. | 38x20 Fay & Scott, compound rest, power cross feed. |
| 18x14 Rahn-Carpenter, compound rest, power cross feed. | 42x26 American, triple geared. |
| 21x10 New Haven, plain rest, power cross feed. | 62x20 New Haven, triple geared. |
| 21x11 Lodge & Davis, compound rest. | 84x20 compound rest, power cross feed. |
| 24x8 Lodge & Shipley, compound rest, power cross feed. | 103x25 Bement, triple geared. |
| 24x12 Fifield, compound rest, power cross feed. | 32-56x12 Fay & Scott gap lathe. |
| 28x10 Gleason, compound rest, power cross feed. | |

MILLERS.

- | | |
|---------------------------------|-------------------------------|
| No. 4 Becker, vertical. | No. 13 Brown & Sharpe, plain. |
| No. 2 Brown & Sharpe, vertical. | No. 24 Brown & Sharpe, plain. |
| No. 4 Brown & Sharpe, plain. | No. 3 Cincinnati, universal. |
| No. 5 Brown & Sharpe, plain. | No. 3 Cincinnati, plain. |

DRILLS.

- | | |
|---|-----------------------------------|
| 16 in. style F, Baker Bros. | 39 in. New Haven, sliding head |
| 22 in. Prentice Bros., sliding head, back geared. | 60 in. Bickford, stationary head. |
| 25 in. Prentice Bros., back geared. | 5 ft. Bickford, universal radial. |
| Baker Bros. high speed. | 5½ ft. Niles, universal radial. |
| 28 in. Snyder, back geared & p. f. | 3 spindle Allen, high speed. |

SHAPERS.

- | | |
|--------------------------------------|--------------------------------------|
| 16 in. Juengst, vertical, crank. | 18 in. Putnam, friction. |
| 18 in. Gould & Eberhardt, pl. crank. | 26 in. Lodge & Davis, shifting belt. |

GEAR CUTTERS.

- | | |
|---------------------------------|-----------------------------------|
| 12 in. Gould & Eberhardt, hand. | 18 in. Brown & Sharpe, automatic. |
| 16 in. Gould & Eberhardt, auto. | 26 in. Brown & Sharpe, automatic. |

AUTOMATIC SCREW MACHINES.

- | | |
|-----------------------------|---------------------|
| ¾ in. No. 52 National-Acme. | ¾ in. "K" Hartford. |
|-----------------------------|---------------------|

PLANERS.

- | | |
|-----------------------------|------------------------------|
| 16x16x4 Hendey, 1 head. | 32x32x8 Pease, 1 head. |
| 24x24x5 American. | 32x32x8 Betts, 1 head. |
| 24x24x5 Gould & Eberhardt | 48x48x16 Sellers, two heads. |
| 30x30x6 Pond, 1 head. | 54x48x16 Pond, four heads. |
| 30x30x8 Cincinnati, 1 head. | 81x54x16 Betts, 1 head. |

HAMMERS.

- | | |
|--------------------------|------------------------------|
| 50 lb. Bradley, compact. | 800 lb. Farwell, board drop. |
|--------------------------|------------------------------|

MISCELLANEOUS.

- | | |
|---------------------------------------|---|
| Cold saw, 24 in. Newton. | Oven furnace, No. 5 American. |
| Engine, gas, 8 h. p., Fairbanks. | Pipe machine, 2 in. Bignall & Keeler. |
| Engine, steam, 8x10 in. Ide. | Pipe machine, 3 in. Jarecki. |
| Grinder, plain, No. 21 Landis. | Profiler, 1 spindle, Garvin. |
| Grinder, universal, No. 2 Landis. | Screw machine, 1½ in. Spencer, automatic, double end. |
| Grinder, universal, No. 2 Oesterlein. | Slotter, 13 in. Bement. |
| Keyseater, No. 1 Davis. | |

SECOND-HAND MACHINERY

FOR SALE BY

O. L. Packard Machinery Co., . Chicago, Ill., and Milwaukee, Wis.

LATHES.

24x12 Lodge & S., c.r., qk. change gr. | 72x22, comp. rest, with raising blocks
22-36x22, plain rest. | to increase swing to 120 in.

PLANERS.

24x24x7 Pease. | 36x36x16 Sellers.

DRILLS.

5 ft. Cincinnati full universal radial. | 40 in. New Haven upright.

MILLERS.

No. 0 Brown & Sharpe universal, | No. 5 Garvin, plain.
vertical attachment. | No. 24 Oesterlein, plain.
No. 2 Becker-Brainard vertical.

MISCELLANEOUS.

Die milling machine, Thurston. | Keyseater, McKinnon.
Gear cutter, 36 in. Brainard. | Riveter, 4 in. Shuster.
Hammer, steam, 250 lbs. Bell.

FOR SALE BY

Don M. Osborne, . 719 St. Clair Ave., N. E., Cleveland, Ohio

AIR COMPRESSORS.

8x8x10 in., Ingersoll-Rand, class F steam driven, capacity 108 cu. ft. at 50 lbs.
pressure per minute.

6x9x9 in. Rand Drill Co., class C, cap. 100 cu. ft. per minute at 80 lbs. pressure

BORING MILLS.

9 ft. bet. housings, 42 in. under rail, 90 in. tabl., sgl. hd, good order, \$750.00

HAMMERS.

500 lb. Bement, steam, single frame. | 5,000 lb. drop, friction board, Toledo,
2,000 lb. Bement, steam, dbl. fr. \$750 | for sheet metal work.

LATHES.

16 in. x 8 ft. Perkins, rise and fall rest, \$140.

18 in. x 8 ft. New Haven, rise and fall rest, \$140.

22 in. American turret lathe, 4 1/2 in. hole thru spindle, with pump, scroll
chuck and Reeves variable speed countershaft.

25 in. x 10 ft. LeBlond heavy turret lathe, with power feed turret on shears,
three step cone, double back geared quick change, 24 in chuck, heavy car-
riage with compound rests.

30 in. x 31 ft. Ohl & Co., triple geared, 25 ft. between centers, comp. rests.

35 in. x 12 ft. Hughes & Phillips, triple gear, compound rest, \$250.

48 in. x 24 ft. Michel, triple back geared, compound rest, 18 ft. centers.

60 in. x 42 1/2 ft. Hughes & Phillips, tr. gd., c. r., 33 ft. between centers.

60 in. x 45 ft. Roach, triple geared, 35 1/2 between centers, compound rest.

66 in. x 35 ft. Hughes & Phillips, triple geared, 26 ft. centers, 48 in. raised to 66 in.

64 in. x 60 ft. Thomas Shanks & Co., Glasgow, double lathe, 50 ft. between
centers; one end swings 64 in., other 50 in.; 2 head stocks, 2 tail stocks and
2 carriages; triple back geared at both ends; one carriage has screw feed full
length of bed, the other has double tool post and feeds half length of bed;
will sell cheap.

120 in. x 18 ft. gap lathe, triple geared, compound rest.

PLANERS.

24x24x6 Pease, single head.

36x36x8 Cleveland, open side, 1 head,
practically new.

60x60x18 Betts, 4 hds., good cond.

60x60x20 Detrick & H., o. s., 4 heads.

84x36x12 1/2 Stone Mche. Co. 1 hd. \$475

96x96x20 Betts, single head, good or-
der, cheap.

SLOTTER.

Slotter, 24 in. Niles, actual stroke of bar 60 in., for outside work; excellent
condition, price reasonable.

If you have used machine tools for sale or exchange, advise me.

SECOND-HAND MACHINERY

FOR SALE BY

W. L. Perkins Jr., & Co., 136 Liberty St., - New York City, N. Y.

LATHES.

80 in. Bement driving wheel lathe.
88 in. Niles driving wheel lathe.

34x8 Johnson, comp. rest, p. c. f.
48x12 Harrington, comp. rest, p. c. f.

RADIAL DRILLS.

5 ft. Bement, plain.
5 ft. Baush, plain.

6 ft. Niles, plain.
8 ft. Bement, half-universal.

MISCELLANEOUS.

Boring mill, 80 in. Bement, s. h.
Miller, 34x11 Newton, horizontal.
Miller, 36x12 P. & W. duplex.

Punch, No. 4 Long & Allstatter.
Shear, No. 5 Long & Allstatter.
Slotter, 14 in. Sellers, all feeds.

FOR SALE BY

The E. L. Esley Mchy Co., 555-557 Washington Blvd., Chicago, Ill.

DRILLS.

3 spindle Burnham, sensitive, $\frac{1}{2}$ cap.
4 spindle No. 4 Harrington, multiple,
spdlas adjustable on rail, $\frac{1}{4}$ in. cap.
4 spindle No. 3 Garvin, multiple.

4 spindle No. 1 P. & W. multiple (2).
6 spindle No. 3 Garvin, multiple.
28 in. Hamilton, sliding head, back
geared, power feed.

ENGINE LATHES.

14x6 Springfield, pl. rest, $\frac{3}{4}$ in. hole.
16x6 Flatler, plain rest, $\frac{1}{2}$ in. hole.
16x8 LeBlond, pl. rest, $\frac{1}{2}$ in. hole.
26x12 New Haven, compound rest.
27x18 $\frac{1}{2}$ Lodge & D., compound rest.
28x14 New Haven, compound rest.

30x14 New Haven, compound rest.
30x25 Blaisdell, comp. rest and chuck.
32x18 New Haven, compound rest.
36x25 New Haven, c. r., fine order.
37x16 Putnam, compound rest.

MISCELLANEOUS LATHES.

14 in. Monitor, plain head.
16 in. Monitor, plain head.
16 in. Foster-K. Monitor, gd., pl. hd.
24 in. Davis chucking, set over turret.
28 in. Gisholt, standard turret, comp.
2x24 in. Jones & Lamson., flat tur-
ret (2).

16x6 J. A. Fay Co. brass spinning.
16x10 Auto. Mach. Co., auto. screw
cutting, for cutting screws.
16x5 Schulz-Good spinning lathe.
No. 4 Hardinge Bros. $\frac{1}{2}$ in. precision
bench lathes, complete (2).

BORING MILLS.

30 in. Colburn. turret head, 3-jaw
chuck, rebuilt.
37 in. Streit pulley boring machine.

37 in. Baush & H., 2 heads, pl. table.
48 in. Colburn, 2 heads, 3-jaw combi-
nation chuck, new.

SHAPERS.

15 in. Steptoe, single geared, crank.
16 in. G. & E., back geared, crank.

20 in. G. & E., back geared, crank.
26 in. G. & E., back geared, crank.

MISCELLANEOUS.

Blower, No. 3 Sturtevant, Steel & Co.
Bolt cutter, $\frac{1}{4}$ in. Adams, single
Landis head.
Bolt cutter, 2 in. Bement, single.
Bolt pointer, 1 in. Adams.
Brake, No. 2C Dries & K., 7 ft. 14 ga.
Exhaust fan, No. 4 Buffalo, & c. s.
Grinder, No. 1 Diamond, double,
wheel face.
Grinder, 20x3 in. Diamond, single
wheel, wet.
Hammer, steam, 650 lb., Morgan &
W., double frame.
Hobbing mche., 20 in. Grant, auto.
Keyseater, 18 in. No. 4 Morton, rebuilt
Miller, No. 1 Kemp Smith, universal,
nearly new.

Miller, Ames, Lincoln type, plain.
Miller, No. 2 Aurora, plain, bk. gd.
Millers, No. 4 Garvin, plain (2).
Pipe mche., 4 in. Borden, complete.
Planer, 24x24x6 Ohio, 1 hd., rebuilt.
Planer, 26x26x6 New Haven, 1 head.
Planer, 36x36x8 Betts, 1 head.
Press, No. 4 Walsh, o. b., inc.
Profiler, Ames, 2 spindle, fine order.
Rivet spinner, $\frac{1}{2}$ in. National.
Saws, No. 4 Keystone, cold, 4 $\frac{1}{2}$ in.
Screw machine, No. 2 Foster-K.,
hand, 1 1-16 in. w. f. cap., complete.
Screw machine, 3 in. Standard Cleve-
land automatic, 5 hole turret.
Threading mche., roll, Rudolphi & K.

A partial list of used machinery for quick delivery. Write for our complete list of new and used machinery, and state your wants; we may have it.

SECOND-HAND MACHINERY

FOR SALE BY

The Osborne & Sexton Machinery Co., . . . Columbus, Ohio.

LATHES.

13x7 Pratt & Whitney, taper attach.
18x7 Wood-Light, rise and fall rest.
26x10 Pond, compound rest, p. c. f.
24x12 Steptoe-McFarland, taper.

32x10 Gage, power cross feed.
32x12 plain rest, taper attachment.
48x18 Fifield, triple geared.
54 in., gap, turret on ways.

PLANERS.

24x24x6, 1 head.

30x30x12 Bement-Daugherty.

DRILL PRESSES.

14 in. Barnes, w. and l.

20 in. Davis, back geared, pwr. feed.

20 in. Champion, back geared, p. fd.
54 in. Sellers, comp. table, b. g., p. f.

MISCELLANEOUS.

Cock grinder, double.
Flexible shaft drill, complete.
Gas engines, 10, 20, 35, 60 and 120 h. p.
Grinder, universal, Brown & Sharpe.
Hack saws, Nos. 1, 2 and 3.

Hammer, steam, 1,100 lb., Morgan.
Hammers, 450, 750, 3,000 and 5,000 lbs.,
Toledo friction board drop.
Lathe, turret, 2x24 in. Jones & L.
Tapping machine, Webster & Perks.

We have other second-hand machines. Mail us your requirements.

FOR SALE BY

The Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago.

PLANERS AND SHAPERS.

20 in. Smith & Mills geared shaper.
24 in. Weatherhill shapers (3).
20x20x4 Fitchburg planer.

58x58x10 Hewes & Phillips planer,
with one head on cross rail and one
head on side.

DRILL PRESSES.

30 in. vertical, Barnes.

20 in. Silver, new (2).

36 in. Prentiss, back geared, with
sliding heads (3).

30 in. Prentiss, back geared, sliding
head (2).
4 1/2 ft. plain radial, Gang & Co.
4 1/2 ft. plain radial, Universal Co. (2)

MISCELLANEOUS.

Engine lathe, 10x5 screw cutting.
Air compressor, 8x8 Gardner.
Band saw, 36 in. American.
Belting, 500,000 feet of bargains in
brand new and used leather, rubber
and canvas belting, all sizes and
widths, at prices that mean a posi-
tive saving of 50 to 75 per cent. Send
for complete belt list No. 78.
Blowers, No. 1 Root, belt driven (2)
Blower, No. 1 Root, belt driven.
Blower, No. 3 Root, direct connected
to vertical engine.
Boring machine, horizontal, single
head, wood frame.
Boring mill, 8 ft. Niles, single head.
Cold saw, Bryant, circle, power.
Crane, locomotive, 5 ton Brown.
Crusher, jaw, 9x14 Gates.
Dado head machine, wood frame.
Grinder, wet emery, 17 in. Diamond.

Gasoline engine, 8 h. p. Bates & Ed-
monds, new.
Gasoline engine, 20 h. p. Bates &
Edmonds, new.
Gasoline eng., 20 h. p. Webster, new.
Locomotives, 9x16 Baldwin, 36 in.
gauge (4).
Mortiser and borer, Greenlee.
Punch and shear, Doty Mfg. Co.
Pump, centrifugal, No. 15 Morris,
connected cylinder engine.
Resaw band, McDonough, 44 in.
Saw table, 3x6, wood frame
Straightening mach., bulldozer, gear-
ed, 1 in. stroke, 10 in. adjustment.
Steel tanks:
1000 gallon capacity (12).
1500 gallon capacity (42).
3000 gallon capacity (12).
3600 gallon capacity (15).
3800 gallon capacity (2).

We have large machine shops, and every engine, boiler and machine is
thoroughly overhauled and tested before leaving our plant. In addition we
have structural iron, pipe, shafting, pulleys, corrugated roofing, steel and
metal ceiling and siding, lumber, mill work, complete plumbing outfits for
factories and public buildings, office and parlor furniture. Send for new 500
page catalog No. 889. Free on request.

40 telephones, all Yards 1900.

SECOND-HAND MACHINERY

FOR SALE BY

Champion Tool Works Co., 2426 Spring Grove Ave., Cincinnati, O.

All the following equipment in good condition and a bargain for cash.

GAS ENGINE.

25 h. p. Columbus gas engine and equipment, cost \$800. Our price \$375.

MOTOR.

15 h. p. 3 phase a. c. motor with starting box.

LATHES.

12 in. x 5 ft. Champion lathe, hollow spindle.

12 in. x 8 ft. Champion lathe, hollow spindle.

16 in. x 6 ft. LeBlond belt feed lathe, hollow spindle, and turret on carriage to interchange with compound rest.

FOR SALE BY

**The Motch & Merryweather Machinery Company,
707-715 Lakeside Av., N. W., Cleveland, Ohio**

Branches: Detroit, Cincinnati, Pittsburg.

BORING MILLS.

10-16 ft. Betts, vertical, with 2 heads on rail and extension head.

UPRIGHT DRILL PRESSES.

Dallet, portable (2).

Quint, 6 spindle, turret.

6 in. Prentice, sliding head.

33 in. Bement-Miles.

RADIAL DRILLS.

4 ft. Box, half universal.

4 ft. 6 in. Pond, heavy.

5 ft. Pond, plain, massive.

GRINDERS.

No. 1 Leland & Faulconer, wet tool.

No. 2 Leland & Faulconer, wet tool.

Yankee A. drill grinder.

Yankee PO, drill grinder.

KEYSEATERS.

No. 4 Burr, broaching.

24x2 in. Morton.

ENGINE LATHES.

13x6 Bullard, with turret.

14x8 Flather, 4 step cone, elev. rest.

16x16 Prentice, 4 step cone, double

back geared, compound rest.

20x8 Flather, 4 step cone, belt feed,

compound rest.

20x8 Flather, 5 step cone, belt fd. c. r.

22x12 Lathe & Morse, 4 step cone,

belt feed, compound rest.

24x12 Lodge & Shipley, 5 step cone,

compound rest, quick change.

52x17 Nondescript, 5 step cone, belt

feed, compound rest.

MILLING MACHINES.

No. 2 Garvin, plain.

No. 15 Garvin, plain.

Pratt & Whitney, hand.

PLANERS.

10 in. Busch, crank, with swivel vise.

20x20x4 Wheeler, 1 head.

24x24x6 Whitcomb, 1 head.

24x6 Ohio, 1 head (2).

27x5 New Haven, 1 head.

SHAPERS.

15 in. Hendey.

15 in. Smith & Mills, single geared

crank.

16 in. Gould & Eberhardt, crank.

20 in. Hendey, friction.

24 in. Ohio, shifting belt.

26 in. Cincinnati, shifting belt.

28 in. Hendey, friction (3).

32 in. Gould & Eberhardt, ex. base.

TURRET LATHES.

22 in. Universal, chuck fitted.

24 in. Lodge & Shipley, screw mach.

28 in. Gisholt, rapid traverse.

36 in. Bullard, vertical.

MISCELLANEOUS.

Band saw, 26 in. Crescent.

Centering mche, 5 in. Whiton, 2 spdl.

Gear cutter, 33x9 in. x 4 p. G. & E.

Hammer, 60-lb. Bradley, cushion

helve.

Polishing lathe, No. 3 Diamond.

Pneumatic punch, No. 1 Caskey.

Pneumatic gap riveter, 10x36 in.

Chicago.

SECOND-HAND MACHINERY

FOR SALE BY

J. W. Wright & Co., 2nd and Morgan Sts., St. Louis, Mo.

LATHES.

18x8 Dietz-Schumacher, comp. rest.	20x12 Gray, compound rest.
18x8 LeBlond, compound rest.	20x12 Bradford, compound rest.
18x10 Muetler, plain rest.	28x12 Fifield, compound rest.
19x10 Gray, compound rest.	28x16 New Haven, compound rest.
19x12 Gray, compound rest.	42x15, compound rest.

PLANERS AND SHAPERS.

15x15x36 in. New Haven.	24 in. Steptoe, triple geared.
24x24 in. x 8 ft. Pease, 2 heads.	24 in. Hendey, friction.
26x26 in. x 8 ft. Pease.	

SCREW MACHINES.

No. 5½ Bardons & Oliver, 2½ in. capacity, A-1.

DRILLS.

2½ ft. Hilbert radial, speed box drive.	3½ ft. Fosdick.
34 in. upright, back geared, power fd.	

MISCELLANEOUS.

Bolt cutter, double, 1½ in. National.	Milling machine vise, Brown & Sharpe, large.
Cock grinder.	Motor, 5 h. p. Wagner, a. c.
Compressor, 22x26½x24 in., Ingersoll, straight line.	Press, horn, No. 12 Toledo.
Hack saw, power.	Press, double crank, 202½. Toledo.
Hammer, power, No. 4 Perfect.	Presses, small (2).
Lathe, 15 in.x5 ft. Fox Monitor.	Punch and shear, combination, Ohl.

FOR SALE BY

McCabe Machine Co.,

P. A. McCabe, Pres., 95 Liberty St., New York, N. Y.

BORING MILLS.

36 in. Bullard, vertical turret, with side head, near new.
72 in. Niles, double head, near new.
Betts horizontal, 3 in. bar, power lift, rotary attachment, near new.

GEAR CUTTER.

24 in. Brainard, full automatic, cuts spur and bevels, near new.

LATHES.

16 in.x8 ft. Hendey-Norton, quick change, near new.
18 in.x8 ft. Lodge & Shipley, quick change, taper attachment, near new.
32 in.x12 ft. Fitchburg heavy pattern, good.

RADIAL DRILL.

American 4 ft. arm, triple geared, speed box, near new.

TURRET LATHES.

2x24 in. Jones & Lamson, flat turret, good.
3½ Bullard, 26 in. swing, triple geared, hex. turret, near new.

SLOTTERS.

Bement-Miles, 8 in. stroke, 24 in. table, good.
Sellers, 12 in. stroke, 30 in. table, good.

"Near new" indicates condition practically good as new.
"Good" indicates condition not quite "near new."

Second-Hand Wood-Working Machinery.

A very complete list of second-hand wood-working machinery of all kinds will be found in the current issue of The Machinery List, a copy of which will be mailed free by the publisher on request. Address **A. H. Hitchcock, 626 Monadnock Bldg., Chicago.**

THE LODGE & SHIPLEY MACHINE TOOL CO.

Offers at a bargain the following tools, some of which are NOW IN USE in its own shops:

LATHES.

One 24 in. x 8 ft., 5 step cone head, quick change gear Lodge & Shipley lathe with turret on carriage.

One 30 in. x 18 ft., 5 step cone head, quick change gear Lodge & Shipley engine lathe.

Two 3½ in. x 60 in. Fitchburg Machine Works Lo-swing lathes.

One No. 3 Lodge & Shipley Rapid Reduction lathe with 8 ft. bed.

TURRET CHUCKING LATHE.

One 30 in. x 8 ft., 4 step cone head, power feed to turret, Lodge & Shipley.

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CINCINNATI, OHIO, U. S. A.

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